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Original Articles

THE PHYSIOLOGIC AND LEGAL STATUS OF THE FETUS IN UTERO.*

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The two most important events connected with a life-history are its beginning and ending.

Embryology has persistently sought to discover and to interpret the earliest manifestations of the former, while pathology, with equal tenacity of purpose, has endeavored to ascertain the causes and incidents of the latter. So far as the beginning of a life-cycle is concerned, embryology has thoroughly established the doctrines of gamogenesis and agamogenesis, the former being the rule among the higher orders of plants and animals, the latter among the lower orders. Reproduction among human beings must, therefore, obey the law of gamogenesis; hence, two ancestors—male and female—contribute to the origin of every new member of the human race, the contributing elements being spermatozoon and ovum, respectively.

While these germ-cells possess inherent vitality and motor power, especially the spermatozoon, neither one can separately and alone evolve itself into a higher or more complex morphologic entity. Put the two together, however, under favorable conditions, and a new unit results, one capable, under proper environments, of evolving itself into a fully-developed human being, that is, the new unit represents all of the potentialities of which the future adult becomes the outward and visible expression.

In contributing the germs they respectively furnish, the male and female have done all they can do toward the creation of the new unit and toward its endowment with physiologic and psychologic functions similar to their own. From that time forth the new being, possessing all of the attributes of living bioplasm—motion, absorption, sensation, and fission, or multiplication—must be the architect and builder of its own body. True, for nine months the female performs the essential and hospitable function of hostess, and generously supplies the young, and presumably welcome, guest with oxygen, inhaled through her own lungs; with food, elaborated in her own digestive system, and with warmth supplied by her own blood, but in fulfilling these high functions she is simply furnishing the material, the brick and mortar, so to speak, out of which the young builder must erect its own corporeal superstructure.

In the work going on, the part played by the female corresponds with the office of brick and mortar carrier, that by the young builder, with the office of skilled artisan, who takes hold of the materials brought and puts them together in the shape and form of a human body. The new being as it grows and develops is not the passive result of work done by the physiologic forces of the female, but is an autochthon, using, however, very refined material furnished by the hostess. The principle is precisely the same as one that prevails in social life. A hostess places dishes, delicious and wholesome, before her guests, but is powerless to force them to partake thereof; they must, by their own volition, take hold of and appropriate the food brought within their reach.

Science does not forbid, on the contrary justifies, the belief that, could the fertilized ovum, before it has formed attachments to the womb in which it receives its fertilization, be transferred without violence to another womb in a similar condition to the first, its career of growth and development might proceed undisturbed. Indeed, could the transfer be made to an artificial womb, or incubator, in which the conditions were identical with those of the natural womb, its growth and development might still proceed undisturbed. The conjunction of spermatozoon and ovum must, therefore, be a great biologic event, one that endows the newly-formed unit with physiologic functions and pyschologic attributes; indeed, makes it, in a qualified sense, an independent human being. Although the powers of this new being are feeble, its potentialities are great, the evolvement of which constitutes the growth, development, and achievements of its life-history.

The cardinal postulate I desire to emphasize is that the vitality, the life-force, and the physiologic functions of the new being reside within itself and not in the hostess. As has been said, the latter sends blood to the fetus, freighted with food and air, but she is powerless to force it to accept either; the new being eats because it is hungry and breathes because it feels the need of oxygen, both acts being vital efforts of its own. Soon after receiving its endowment of physiologic functions the new comer settles down in its velvety and temporary home, prepared by the proliferating lining of the maternal womb, and dominated by an instinct, yea, an intelligence, coeval with its own corporeal origin, proceeds to differentiate itself into bone, sinew, tendon, muscle, blood vessels, viscera, brain, and nerve, and with the skill of a consummate artist fashions these in miniature of an adult human being, the highest type of animal life. The fetus performs these physiologic functions by virtue of its own vitality and power, originally derived, it is true, from the two parental germs, but when these have been consolidated into a new unit—a tertium quid—a self-acting and, in a qualified sense, a self-sustaining human being has been created.

At the end of nine months the silent and unseen artist has filled his temporary home with his living self, whereon the hostess by means of forces marvelously

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scientific and practical ushers him into the outside world as a plump and rosy baby. When was that baby born, a few minutes ago or nine months ago? Science and logic give one and the same answer. If birth means the act of coming into life, as the dictionaries tell us, unquestionably the baby under discussion came into life nine months ago, and at the end of that period simply changed its domicile. Why not, then, abolish the term conception, which is liable to be more or less misleading and confusing, especially to the lay mind, and substitute for it the more scientific and correct term, birth? This done, then, the one term, delivery, either premature or at full term, would adequately express the transition of the child from intrauterine to extrauterine life. Besides, the adoption of this nomenclature would help to clarify the entire subject of fetal life and would lead to the enunciation of definite, inflexible, and absolutely correct principles of jurisdiction applying thereto. If the baby in question is a living human being when delivered, was it not a living human being the day before, the month before, six months before, eight months and twenty-seven days before? Can a point of time betwixt conjunction of the parental cells and the delivery of the child be fixed before which it did not possess the nature of a human being and after which it did possess the nature of a human being? Did its nature undergo any change between the time at which conjunction of the male and female germs occurred and that at which the baby appeared in the outside world? Was not the nature of the baby the same from the beginning to the ending of its uterine life? Was it not from first to last simply a question of the growth and development of one and the same being, and after the completion of the period of uterine life will it not continue to be a question of the growth and development of one and the same being up to physical maturity?

With these questions answered in the affirmative, as they must be, we are forced to concede that when in the red-hot furnace of congeniality two germs—male and female—are brought together that fuse themselves into one, a new being, crowned with humanity and mentality, comes into life. If this be true, does not the new being, from the first day of its uterine life, acquire a legal and moral status that entitles it to the same protection as that guaranteed to human beings in extrauterine life? Indeed, should it not receive greater protection, for the reason that to the nature of a human being it adds the condition of utter helplessness, a condition that should appeal in mute, but sublime eloquence to the manhood, the womanhood, and, above all, to the motherhood, of those who can shield and protect it? Lives there a man or woman who would assault and slay a little, laughing, prattling babe? If that be a crime from which the coldest-blooded villain would recoil, how much more a crime to assault and slay an innocent babe quietly sleeping in what should be an impregnable fortress—a babe whose voice is hushed and can not be raised in piteous cry for mercy or for help!

Objection to the use of the terms, birth and delivery, in the senses suggested, might be raised on several grounds: First, that it would involve the date of every birth in more or less uncertainty; secondly, that the fact of a birth could not be certainly known for four or five months after it had occurred; thirdly, that no practical benefit would result from the adoption of the proposed nomenclature. Admit that these objections are entitled to more or less weight, yet, when compared with the advantages that would accrue from the change of nomenclature proposed, the objections dwindle into insignificance. A simple formulation of the advantages will be sufficient to force conviction of the utility of the proposed nomenclature:

1. It would be essentially and scientifically correct to locate birth where and when it actually occurs, in spite of the fact that several months would usually elapse before it could be known that a birth had certainly taken place.

2. It would place a pregnancy, from the first day of its probable occurrence to its termination, on the high legal and moral grounds it deserves to occupy.

3. It would dignify the position of the *fœtus in utero*, and would establish beyond all doubt or confusion the right of the fetus to the same protection, moral and legal, as is accorded to human beings who have completed the period of their uterine existences.

4. It would unify the terms, fluxion, abortion, and miscarriage, under the one term, premature delivery; then, two expressions, premature delivery and delivery at full term, would cover the entire subject.

5. It would enable lawmakers to enact clear and definite laws for the protection of the *fœtus in utero*, which laws, jurists and juries could administer without doubt or confusion.

6. It would have a strong tendency to promote virtue and to prevent crime, and to build up in every community a positive demand for the protection of human life at its tenderest and most helpless period; it would tend to educate the people on a subject in reference to which they stand in great need of education and would thereby save the lives of many innocent and undelivered babes.

If the argument thus far be sound and tenable, does not the legal status of the fetus become clear and fixed? It is not strange that before science had ascertained the steps and stages of reproduction the law providing for the protection of the fetus should have been inadequate, but after these steps and stages became definitely established no inadequacy on this point should have prevailed. The common law is conspicuously defective in its provisions for the protection of the fetus. The following quotations on this point are made from the American and English Encyclopedia of law: "According to some authorities, it never was an act punishable at common law to commit abortion with the consent of the mother, provided it was done before the child became quick; but others are not disposed thus to restrict the criminal act, and hold that it may be committed at any stage of pregnancy. If the abortion was committed after quickening, it was punishable only as a misdemeanor. If done without the woman's consent, the act was held to constitute an aggravated assault."

Inasmuch as the common law was wholly inadequate for the protection of the fetus it became imperative that this defect should be supplied by statute law. Quoting from the same authority cited above, it is gratifying to find the following statement: "The statutes enacted on this subject in most of the states fail to draw any distinction between the commission of the offense, or attempt at commission, before and after the quickening of the child in the womb, making it a felony in either case. But some states still retain the distinction, punishing the act or attempt more severely when done after quickening. In Michigan it is essential that the child be quickened. The means denounced by the various statutes are the unlawful or malicious supplying, or ad-

ministering to a pregnant woman, or causing or procuring to be taken by her, any drug, poison, substance or noxious thing, or unlawfully using or causing to be used any instrument or other method whatsoever, with intent to procure or cause an abortion."

The statutes on this subject recognize the right of a physician to produce an abortion in the interest of the mother. The question arises: Should this right be exercised? Without undertaking to discuss the various conditions under which the exercise of this right might be considered, the broad proposition is laid down that the occasions on which it would become imperative to sacrifice the life of the child to save that of the mother are extremely rare. With the two great resources of rectal alimentation and Cesarean section at command, it is believed that practically every pregnancy can be safely carried to a point at which the life of the child may be saved. The methods and means of maintaining nutrition by rectal alimentation have been so perfected that the production of abortion, or of premature delivery, for gravid nausea should rarely or never be required. At all events, by this resource the woman ought to be carried to the point of certain viability of the child before premature delivery is resorted to. For deformed pelvis surgery, with its tremendous advances in skill and technic, offers in Cesarean section a resource for saving the life of the child, and at the same time of jeopardizing to such a small degree that of the mother, that it should be universally employed in such cases. Dr. L. L. Hill, a surgeon of distinction in my state, and fully informed on these questions, furnished me recently the following statistics applying to Cesarean section: "1. Zweifel performed 76 Cesarean sections with 1 death. (J. Whitridge Williams, professor of obstetrics in the Johns Hopkins University, 1903.) 2. In 1903 J. Whitridge Williams collected the reports of 335 cases of Cesarean section by various operators, with a mortality of 6.87 per cent. 3. Not a single death of a mother occurred in 11 Cesarean sections recently performed at Johns Hopkins Hospital. 4. The mortality in Cesarean section should be about the same as that resulting from operations for simple ovarian tumor."

Without pursuing this discussion further, I submit to this Section the following propositions, and invite an expression of judgment thereon, not only by the individual members, but by the body:

1. The conjunction of male and female germs constitutes, from a scientific standpoint, birth.

2. The term conception should be abolished and that of birth substituted therefor.

3. In dealing with all stages of pregnancy, even the earliest, physicians should realize the extreme gravity of the condition, and should never condemn to death a fetus, however young, without the maturest consideration, and without calling to their aid the highest professional authority within reach; in a word, without carrying the case to the nearest and wisest medical supreme court accessible.

4. The principles herein contended for should be impressed on the members of the profession, taught to medical students and promulgated widely among the people.

5. Medical men should interest themselves to see that the statutes of their respective states are ample for the protection of the *fœtus in utero*.

DISCUSSION.

DR. H. O. MARCY, Boston, said that his opinions correspond with those of Dr. Sanders. He believes that the conclusions should be emphasized most positively. A physician may induce an abortion because he believes that the life of the mother is more valuable than the life of the fetus, but he should try to conserve the life of both to the best of his ability.

DR. W. H. SANDERS declared that it was not stated in the paper that abortion should never be brought about, but that it should be the result of very mature consideration and after consultation with the highest and wisest and most experienced authorities within reach.

STUDIES IN ROENTGEN RAY DIAGNOSIS OF CHEST DISEASES.

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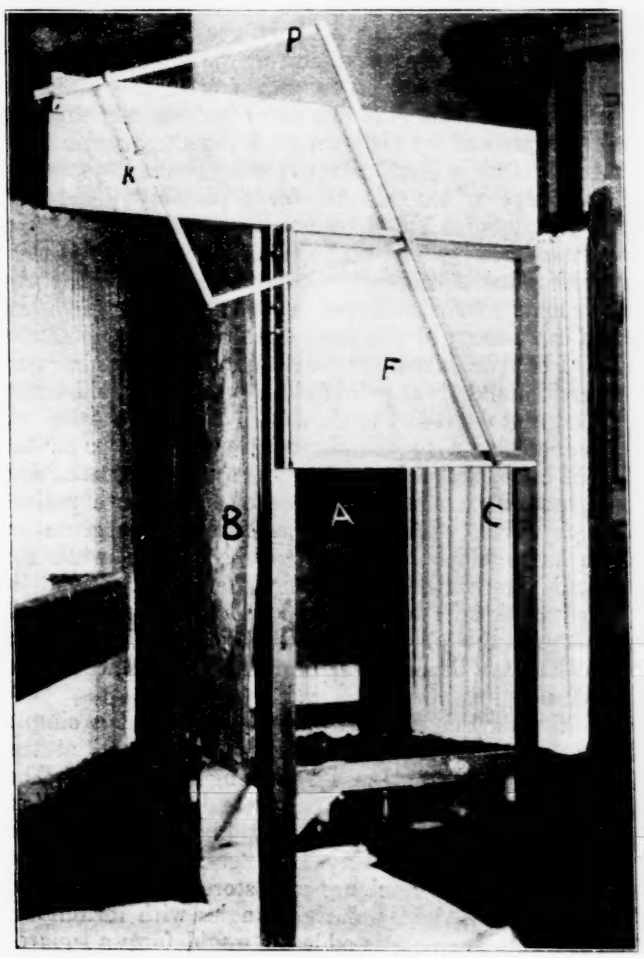
I.

The use of the Roentgen ray as an aid in the diagnosis of chest diseases has by no means received the attention that it justly merits. No doubt its neglect has been principally due to the fact that the expense is still a factor, and at the same time the danger from burns, which lately has been so grossly magnified, has deterred many who would have otherwise given their sanction, if not direct co-operation.



When the *x*-ray first came to be used, it seemed as if it was to be generally adopted for routine examinations in diseases of the chest, mainly through the use of the fluoroscope, but during the excitement many methods of examination were advised that consisted of so much detail that it served more to repel than to at-

tract those who were only passively interested. For instance, methods were advised to measure the density of pulmonary consolidations by such means as graduated metal scales, of different sorts, i. e., one layer of metal superimposed on another, different thicknesses of wire, or different sized perforations in a sheet of metal, and it was soon found that the personal equation was such a great factor that, generally speaking, they were found to be useless, and we hear very little about them. Besides the element of personal equation, other facts entered into the cause of error by the use of such apparatus.

The fluoroscope itself was soon found to be a rather fickle instrument. This was caused in the most part by its degeneration, or variation in the salt from day to day. At the same time the variation of the *x*-ray tube, darkness of the room, the length of time the examiner has allowed his eyes to become accustomed to the darkness, etc., all enter into the cause of error, if not most minutely considered.

But as this field became more developed, it was found that the minute definitions were best studied from the radiograph, and these must be made by an exposure of a few seconds, or else the movements of the chest will destroy all that is to be gained. These are best made without the use of intensifying screens, as they also tend to destroy detail.

Previous to the introduction of these rapid plates it was found that we could study greater detail in the chest with the fluoroscope, and at the same time it was well known that it was an easy matter to overlook a fracture of a bone with this same instrument; this was easily explained by the fact that the fluoroscope lacks minute definition, and when it was necessary to expose a chest five or ten minutes for a picture we obtained even less detail. Yet the fluoroscope still has some use, for even from the best plates, with all possible technical imperfections eliminated, we are unable to study the movements of the different organs and their modifications in disease; at the same time we can not obtain a view of the parts from several different positions in rapid succession, and these points alone open up a field which give a great degree of usefulness.

The objection to the use of the fluoroscope is the risk of burn, and this must be carefully considered and the greatest precaution must be taken for both patient and physician. The former is likely to be given an acute burn, which is by no means agreeable, while the latter is more likely to suffer from what might be termed a chronic burn, which is more insidious and less active, though in the end the result is likely to last a lifetime, if not to terminate the existence of the individual.

To obviate this accident, we have devised a simple screen for the protection of the operator, and at the same time it is used as a recording apparatus. The screen is made of wood in three sections, each section about 24 inches wide and 6 feet high. These hinge together with the ordinary L hinges, so they can be taken apart for convenience and stored. Each section is made to hook rigidly at right angles with its fellow; thus if a fourth side was added it would form a square-shaped pyramid. By leaving one side open the patient can easily be placed in position or removed as desired. Two sides of the screen are covered with metal; thin sheet lead is best. In one is a movable window for the fluoroscope; and it might be here stated that the fluoroscope should be large enough to give a shadow of the whole chest without being moved. Small fluoroscopes are useless and even dangerous. The third side is not covered with metal, but simply with black paper to enclose the *x*-ray tube and thereby lessen the light in the room, and at the same time to act as a frame for measurements and plumb lines used for centering the *x*-ray tube. The fact that no metal is on this side lessens the danger for puncture. The side directly opposite has the frame for the fluoroscope adjustable for different positions, depending on the patient's condition. Over the fluoroscope is placed a piece of plate glass, which is transparent to light rays, but blocks the *x*-ray to a great extent. At the same time it serves another purpose, in protecting the screen from being scratched by the point of the pantograph, which is used for recording the conditions as they exist. The pantograph is firmly attached to the same side of the screen on a soft piece of wood, so that paper can be easily placed under the pencil by a few thumb tacks. The tracing on the glass over the fluoroscope will be thus easily recorded, about one-sixth its natural size, which is very convenient for records. It is best to have this instrument attached to the side, not to the protecting connecting side, as it will lessen the danger of the operator's coming in the range of the active ray.

To minimize the amount of danger to the patient a cardinal rule must be adopted not to expose the body to the ray longer than is consistent with a thorough examination and not to re-examine at too close range; second, to use only enough energy to penetrate the body, which is much less in a dark room than in one only semi-dark, and at the same time the eye must be accustomed to the darkness; third, to keep the *x*-ray tube at least a foot from the body, and 18 inches is still better. Besides lessening the danger of burn, there is also less distortion of the shadows on the screen. Unfortunately, in heavy subjects it will be found that 18 inches is too far away for a good penetration. The use of a large fluoroscope that will cover the whole chest is here again explained.

II.

Though we have examined a considerable series of cases, a large proportion of which Dr. Musser has put at our disposal from both his ward and his private practice at the Presbyterian Hospital, we do not claim to add anything to the general principles and findings as set forth by others in the same field. We simply wish to add our testimony as to the usefulness of this means of diagnosis in thoracic diseases, to mention our simple means of securing records of fluoroscopic shadows, which Dr. Newcomet has described and pictured above, and to refer to a few cases where this method has shown its superiority either in point of time or precision, or both.

The drawbacks to the fluoroscopic work are the necessity of doing it at night to insure a sufficiently dark room, and the pavillion system of hospital construction, which renders difficult or impossible the examination of many acutely ill patients. The Roentgen examination must be considered a supplementary means of diagnosis and its findings interpreted solely in connection with the data obtained by the history and all other means at our disposal. For instance, a shadow showing involvement of a part of one lung may mean tuberculosis, pneumonia, pleurisy, loculated effusion or new growth, and only the history of the case and the other means of diagnosis enable us to say definitely which it is. Thus used, it will put inspection on a level at least with percussion in pulmonary disease. In fact, inspection,

as represented by both fluoroscope and skiagraph, when brought into direct contrast with percussion, in many conditions appears to us to have a decided advantage. It is but the outcome of the higher development of the sense of sight, as compared with the sense of touch, in the ordinary individual. A pneumonia or tuberculosis beginning deep in the chest may be revealed by the *x*-ray examination before other signs and symptoms are conclusive. A not infrequent type of case is like the following: A woman of 30, anemic looking, troubled with cough and recurring diarrhea, was examined by us. Her general appearance, the cough and the family history strongly suggested tuberculosis, but there was no sputum in which to seek tubercle bacilli and no evening fever. A systematic examination of the chest on two occasions by the ordinary means gave no satisfactory evidence of consolidation, and it seemed necessary to accept the enteritis as probably the only cause of the trouble so far; but it failed to explain the cough satisfactorily. The Roentgen examination with the screen at first showed only a suspicion of a darkening at the level of the inferior angle of the left scapula. Three weeks later, on her return from an outing, this area had increased and was now recognizable by compression and auscultation. In her case the *x*-ray gave a clue to the spot on which to center the attention before the examiner had been keen enough to light on it by other means.

About a year ago, when typhoid was rather prevalent, a girl of about 18, whose mother had a fibroid process in one lung and whose brother had had incipient tuberculosis, developed a moderate fever after feeling more or less ill for two weeks. A quick and definite decision was imperative, as a journey to the South Pacific had been arranged and the time for sailing was at hand. All known means of differential diagnosis were used except the Roentgen, which, in the light of later experience, would probably have been the most useful. Largely because of the strong family predisposition and the failure of any further typhoidal symptoms to develop, she was allowed to sail. On her return, as she had not gained, and as the right upper lobe now showed slight jerky inspiration, she was subjected to the Roentgen examination. The number of enlarged lymph glands lying beside the middle shadow; which were evident even on the screen, showed at once where the trouble was from the first, and had we used the *x*-rays at that time we should probably have sent her off with less misgiving. In fact, the detection of enlarged mediastinal glands has seemed to us one of the most useful provinces of the *x*-ray. In children it is specially applicable because of their thin chests, though we have used both skiagraph and skiagram successfully and frequently with adults. In no class of cases has it served us better than in making an early diagnosis of secondary involvement of the mediastinal glands coming on after the removal of the breast for carcinoma. Within a few weeks in two quite corpulent women, each of whom had a breast removed less than two years ago, by means of skiagrams, we have been able to give a positive diagnosis at a time when the only symptoms were apprehensive nervousness, some pain and slight dyspnea. That we were right the further history is unfolding. At present one case has some facial cyanosis, and the glands of the other are evident to percussion now that we know where to seek most carefully. In Hodgkin's disease we have been able to detect by both screen and skiagram the continuation of the enlarged glands of the neck into the thorax.

As said before, in acute diseases like pneumonia, we have not been able to examine cases as a routine measure. However, a method which presents to the eye both the shadow and the extent of consolidation both before and long after it is discernible by auscultation and percussion, and which alone shows the impaired movement of the diaphragm, is specially serviceable in atypical cases like central and senile pneumonia.

In pleurisy with effusion, the revelation to the eye of the dark shadow with its movable level, the displaced heart and the blotted-out diaphragm on the affected side, must add precision to the diagnosis.

Dr. John M. McLean has very kindly just furnished us a case of new growth of the thorax in a young man for examination. The case had been diagnosed by several physicians at first as pleurisy with effusion, as the signs were typical of that condition. The Roentgen examination gives a picture like a large effusion, with wide displacement of the heart. Two points differentiate it from diffusion. First, at rest the dark shadow at the right continuous with the heart gradually decreases in density toward the left. Second, on full inspiration the mass lights up irregularly, one or two areas being quite translucent.

As an example of the usefulness of this method in the exact location of pathologic lesions, we may cite a case of interlobar empyema following pneumonia, which we were able definitely to locate as lying posteriorly between the right upper and lower lobes.

Nowhere does the screen give livelier satisfaction than in the study of the heart and great vessels of the thorax. Here the fluoroscope shows the living, pulsating organ, while the skiagraph reminds one of a composite photograph, the sharpness of outline being lost because of the movement of pulsation. This is lessened in the instantaneous skiagraph, but the screen alone will show us the moving heart. The shape, size and position of the heart we have been able to determine by the skiagraph in at least two cases where the muscular development was so tremendous as to prevent entirely the casting of a sufficiently distinct image in the screen. In these cases, both men, the marked muscularity as well as fat, made percussion and even auscultation of comparatively little use. The absence of shadows suggestive of aneurism, and the normal position of the heart, with greatly increased transverse diameter, taken in connection with the history of the case, made dilatation due to excessive exercise the most probable explanation of the dyspnea and arrhythmia. The examination of the heart by the screen after outlining it by percussion shows the relative limitation of percussion and reveals the greater accuracy of the outline made by the pantographic arrangement above described. Since the heart lies comparatively near the screen, the shadow is relatively accurate, and any increase or decrease in size or change in position can easily be recorded by pantographic tracings at intervals, the technic being constant.

A neurotic young woman from Dr. Mitchell's service was referred to us for examination by Dr. Cornell. There was a history of spells of dyspnea at intervals, which seemed too genuine to be considered simply hysterical. The heart when examined by the usual methods showed only a pulmonic systolic murmur, which was considered functional. There was nothing in the pulmonary, cardiac, renal or blood examinations to explain the attacks. The fluoroscope showed the small-

est heart that we have ever seen in a woman of her weight and physique. Evidently it was a case of congenital hypoplasia. There was enough cardiac energy for existence, but no reserve for the requirements of an ordinarily active life. That anyone would have diagnosed the condition satisfactorily by percussion we doubt. The form of the heart in the organic lesion takes a certain type in one's mind. The wider transverse diameter of the mitral lesions and the elongated shadow of the aortic lesion are really reducible to definite diagrams. The constant darkening of the pulmonary reflex in mitral disease as compared with aortic disease is a diagnostic point between the two conditions. The obstructed pulmonary circulation is the cause. The distended right auricle would come into prominence more often were it not for the fact that in just the conditions where it is most overfilled (except emphysema) the pulmonary shadow is deepest and obscures the auricle. A rather thin boy of ten years afforded us the most prominent left auricle that we have seen. The lesion was evidently mitral insufficiency, but the fullness of the left auricle and the depth of the sulcus between auricle and ventricle we had never seen so marked before both in skiagram and on the screen. A natural deviation of the heart, as well as an overfilled auricle must have been the explanation, as in mitral disease ordinarily no such marked auricular shadow was seen. Changes in position of the heart could not be better demonstrated than in some four cases of mitral diseases with secondary tricuspid insufficiency and enlarged left lobe of the liver. The lateral enlargement of the heart was conspicuous, but the wide change toward a horizontal position supported by the diaphragm and left lobe was remarkable. That the so-called apex could be so far displaced as to cause a diffuse pulsation well up toward the axilla and beyond the anterior axillary line could be understood when a goodly part of the left ventricle was seen to strike the thorax wall at each beat. With the recovery of compensation under rest and digitalis the heart assumed again more nearly the vertical position on full inspiration.

The number of aneurisms at our disposal has been small, but their fluoroscopic study helpful. In at least two cases we have noted an unusual projection to the left of the descending part of the arch of the aorta. They suggested dilatation of the aorta or small aneurisms, though there were no reasons for suspecting either. In one case the thorax was normal, in the other there was fibroid tuberculosis of the right upper lobe. A possible explanation is that the solidified lung offered less opportunity for the vessels to sink into its substance in inspiration. They interested us as illustrating that the part of the descending aorta visible on the screen varies, and one should not be misled into pronouncing such variations aneurisms. In a case of aneurism of the descending aorta there was enough enlargement of outline in pulsation to differentiate it from other possible consolidations, as enlarged glands. The skiagraph was better in detail, but of course could show no pulsation. In case of complete coagulation in the sac the simple movement due to pulsation without enlargement of outline in the shadow makes it difficult, if not impossible, to say decisively whether one is dealing with an aneurism or some other solid body, as an enlarged gland. In such cases the image is helpful, and the differential diagnosis, as before emphasized, must rest on the entire findings of the case.

An aneurism apparently beginning in the innominate and involving the subclavian was shown by the skiagraph more conclusively than could have been done by percussion, to involve the aorta proper, thus putting operation out of the question.

In conclusion, we believe that a method that is rarely, if ever, inferior to other methods, usually at least equal to them and sometimes superior, is bound to have a wider recognition and use than at present.

THE EFFECTS OF OSMIC ACID INJECTIONS.

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INDIANAPOLIS.

Billroth and Neuber[1] were the first to employ osmic acid for neuralgia. They used repeated injections by puncture through the skin without exposure of the nerve; as many as twenty injections were given in some cases. Eulenburg,[2] employing a similar method, had good results in only 3 out of 13 cases, which included neuralgias of the brachial, sciatic and trigeminal nerves. Schapiro,[1] who used a 1 per cent. solution of osmic acid in glycerin and water, records 5 successes out of 8 cases at periods of two to six months after injection. Jacoby[3] claims 8 cases of cure out of 18 sciaticas, and warns us that it is "dangerous to implicate a motor nerve." Cohen[4] of Philadelphia used repeated injections (without exposure) into the sciatic nerve, using as much as 30 minims of a 1 per cent. solution. Ellis[3] records the occurrence of some irritation after injection into a thumb in which pain followed a sprain. Mercer[5] injected deeply and repeatedly into the sciatic region, with temporary relief and no ill effects. Franck[6] obtained three successes by direct injection. Turner[7] records a case of trigeminal neuralgia of two years' standing in which he injected into the infraorbital and after ten days relief followed, lasting six months, i. e., to the date when the patient was last seen.

Wright[8] claims that most surgeons who have used osmic acid have injected it more or less at random without exposing the nerve trunk. He further states that such a method is quite sufficient to account for irregular and defective results and that it is also remarkable that so little is said of any ill effects, considering the very marked changes that osmic acid produces in the tissues, as shown experimentally by Frankel and as seen by himself in a case in which he used injections, and which, on removal of a portion of muscle which had been attacked by the acid, showed marked degenerative myositis. In all his cases Wright had exposed the nerve and had injected a 1.5 or 2 per cent. watery solution into the trunk or into branches; sometimes the injection had been both toward the periphery and toward the center, and the acid had generally escaped more or less freely into the tissues immediately around the nerve. Most of this author's cases were much too recent to justify any conclusion as to the permanent value of the method. He contends that it is impossible to eliminate the effect of the exposure and the mechanical results of manipulation and puncture of the nerve and of occasional unintentional section by the trephine.

He deems it clear that if this method is employed, the nerve should be fully exposed and not merely a

1. Lancet, 1885, vol. I, p. 1096.
2. Lancet, 1884, vol. I, p. 443.
3. Lancet, 1885, vol. II.
4. Practitioner, 1889, vol. II, p. 373.
5. Lancet, 1885, vol. I, p. 58.
6. Year-Book of Treatment, 1898, p. 76.
7. Med. Soc. Trans., 1898, p. 357.
8. Med. Chron., Manchester, 1903-1904, pp. 291 to 300.

chance injection made through the skin. Immediate results in his cases as regards both harmlessness and at least temporary relief quite justify the use of the plan before resorting to any such severe procedure as excision of the Gasserian ganglion. He preferred to expose and inject the trunk in some cases rather than to deal with the terminals only; and this is a matter that should be settled, since the severity of the one procedure is of course much greater than that of the other. It is also of importance to remember that delay in relief may occur; i. e., that pain may continue for some days or even longer after the injection and then pass off. So that it is not necessary to assume failure or to repeat the operation until time has been given to make sure that it is necessary.

Wright[8] reports a case of a male, aged 33, who suffered for three years with pain in the testes. The right testis was removed, after which pain persisted in the left testis and cord. Osmic acid was injected into the tissues of the cord, with improvement. In another case, that of a male, aged 31, a postman, there was pain in the left heel, interfering with walking. The posterior tibial nerve was injected with osmic acid. The result was a failure. Wright several times injected the lingual and inferior dental nerve after trephining the lower jaw, with indifferent results. In the majority of these cases, there was return of pain after, at most, a few months. He secured temporary relief by injecting a 2 per cent. solution of osmic acid into the auriculotemporal nerve.

Up to November, 1899, W. H. Bennett[9] had treated 12 cases of neuralgia, involving various nerve trunks, by injections of a 1 per cent. solution, using 10 to 12 minims for each nerve trunk. The symptoms were relieved in a few hours and in all cases the cure seemed to be complete. In Bennett's cases the median, popliteal, peroneal, and the branches of the trigeminal nerve were injected. Bennett believes that the results will be better if the injections of osmic acid be applied early in the course of the disease.

In a personal letter to Dr. J. B. Murphy,[10] Bennett reviews 8 additional cases, making 20 in all. Of these 20 cases, 18 experienced complete relief. The time elapsing between operation and report, however, was, it should be noted, in several cases, very short.

Murphy[11] reported 14 cases in which osmic acid was injected, in a 1 to 2 per cent. solution, into nerve trunks for neuralgia. He found that the injections relieved the pain immediately and for a long period of time. He advised against injection into the superficial tissue for peripheral neuralgia, as the nerve trunks were easily located. He advised also against injection into a motor nerve or a motor nerve area and, therefore, never into a spinal nerve except in amputation stumps. Murphy found local necrosis of tissue about the injected nerve and even the wall of the foramen showed necrotic changes occasionally. The necrosis did not suppurate except in cases exposed to marked infection. In tic douloureux he advocates injection into all branches, including the palatine, lingual, mandibular, supra-orbital and infra-orbital. He calls attention to the fact that there may be two or three divisions of the supra-orbital and that each should be searched for and injected separately. He advises the use of a general anesthetic.

Judging theoretically from experience in resections and ganglion operations, Murphy believes that the relief will not be permanent after the injection of osmic acid. Clinical experience up to date, however, particularly the experience of Mr. Bennett and himself, leads him to believe that many cases are really permanently cured. While he admits that time alone can determine the final results, he commends the injection of osmic acid because of its ease of application, its *nil* mortality and its immediate results. Murphy reports no injections of osmic acid for conditions other than tic douloureux. In these cases he injected osmic acid in a solution of 1 to 2 per cent., 10 minims into each trunk.

9. Lancet, Nov. 4, 1899.
10. The Journal A. M. A., Oct. 8, 1904.
11. Journal A. M. A., Oct. 8, 1904.

AUTHOR'S CASES.

I have injected osmic acid for neuralgia eleven times in nine patients, as follows:

CASE 1.—*History.*—Mrs. W., aged 71 years, was first seen on July 12, 1904. The case was one of typical intense tic douloureux involving the right side of the face. The first paroxysm occurred about ten years previously; subsequent attacks gradually becoming more frequent and more severe. Practically all of the many remedies recommended for the relief of this condition had been tried without benefit. For almost three months prior to the operation the pain had been excruciating, the attacks occurring with exhausting frequency. The whole right side of the face was exquisitely tender, particularly in the neighborhood of the infra-orbital and mental foramina. The tongue was sore and tender at all times, thus greatly interfering with speech. During attacks the pain most acute about the right angle of the mouth and the angle of the right jaw. Violent spasm of the buccinator was almost constantly present during the attacks.

Treatment.—A 2 per cent. solution of osmic acid was injected into the supra-orbital, infra-orbital and inferior dental nerves at the supra-orbital notch and the infra-orbital and mental foramina. The manner of operation was that practiced by Murphy. Ten drops of a 2 per cent. solution of the osmic acid were injected into each branch and two or three drops were forced into the perineurial fat of each foramen around the nerve. At the time of the injection of the osmic acid the nerves were drawn with very slight force from the foramina and held during the injection, but the trunks were not stretched as in the operation of neurectasy.

Result.—Up to the present time there has been no return of the pain since its abatement one week after the operation. During the first week several rather severe paroxysms occurred, these gradually decreasing in severity.

Urinalysis.—An interesting feature of the case was the nephritis occasioned by the elimination of the acid. The urine passed during the first twelve hours succeeding the operation showed nothing unusual; on the second day, however, nephritis resulted. There were no symptoms, either subjective or objective, pointing to its onset or presence, excepting the appearance of and findings in the urine. The patient did not complain of pain in the loins. Urine passed thirty-six hours after the operation showed the following: Reaction, very slightly acid; sp. gr. 1,036; color, dark claret. The specimen was centrifugated and the sediment composed a little over a quarter of the volume. The clear fluid above the sediment was light claret in color, the sediment being dark red. Examination of the fluid portion showed a small amount of albumin, with no sugar, bile or other abnormal substance present. Examination of the sediment showed it to be composed almost entirely of red blood cells. There were no casts, epithelial cells or pus cells. The red blood cells disappeared from the urine on the fourth day.

CASE 2.—*History.*—Miss L., aged 22, had suffered pain, paroxysmal in character, for four or five years. Only the area supplied by the inferior dental branch was involved. Paroxysms had increased in frequency during the last few weeks before operation until the pain was almost continuous, and the region of the lower jaw on the right side was very tender.

Treatment.—On Oct. 10, 1904, ten drops of a 2 per cent. solution of osmic acid were injected into the trunk of the

inferior dental nerve at the mental foramen, and a few drops were forced into the perineurial fat around the nerve.

Result.—Pain persisted for two weeks after injection and then abated and up to the present time has not returned.

CASE 3.—*History.*—Mr. B., aged 27, had had sharp pain for eighteen months in the area supplied by the supra-orbital and auriculotemporal branches. The superior maxillary and inferior dental trunks were not involved.

Treatment.—Open operation was refused and twenty drops of a 2 per cent. solution of osmic acid were injected subcutaneously along the course of the trunk and branches of the auriculotemporal nerve. Ten drops of a 2 per cent. solution were also injected at the supra-orbital notch.

Result.—There was almost complete relief from pain for a period of two months, after which the pain recurred, somewhat reduced in severity.

CASE 4.—*History.*—Mrs. S., aged 41, had had violent pain in the area supplied by the inferior dental and infra-orbital branches for eight years, the paroxysms gradually increasing in severity and in frequency.

Treatment.—On Feb. 15, 1905, ten drops of a 2 per cent. solution were injected into the involved trunks at their respective foramina.

Result.—Pain persisted in both regions without much abatement for ten days, after which it gradually disappeared and had not returned when patient died three months later of cerebral hemorrhage. There was no autopsy.

CASE 5.—*History.*—Mrs. H., aged 71 years, exhibited intense tic douloureux involving the right side of the face, the first attack having occurred twenty years previously, subsequent attacks gradually increasing in severity and in frequency.

Treatment.—On July 5, 1904, a 2 per cent. solution of osmic acid was injected into the supra-orbital, infra-orbital and inferior dental nerves at their respective superficial foramina of exit. Ten drops of a 2 per cent. solution were injected into each branch and a few drops spilled on the perineurial fat.

Result.—The pain persisted for two weeks, after which it abated and did not reappear until the following July one year later, at which time the pain appeared in the area supplied by the inferior dental branch only. Under cocain anesthesia ten drops of a 2 per cent. solution of osmic acid were now introduced through a hypodermatic needle directly into the large mental foramen, without incision, with the result that the pain disappeared for ten days, at the end of which time it reappeared in this branch. An incision was then made and the trunk injected, the pain continuing for one week, after which it practically ceased. The last operation in this case was done on July 25, 1905.

CASE 6.—*History.*—Mr. J., 55 years old, had suffered for about ten years with sciatic neuralgia and had tried all the more common medicinal methods of treatment of this disease.

Treatment.—Osmic acid in a 2 per cent. solution was injected subcutaneously at three points along the course of the sciatic nerve on two occasions, one month apart.

Result.—Each time there was slight temporary benefit. The effect was no more pronounced and no more lasting than that which had been produced by injections of thein in two-grain doses in a similar manner in the same case.

CASE 7.—*History.*—Mrs. C., 35 years old, suffered with neuralgia, implicating the infra-orbital and auriculotemporal branches.

Treatment.—On March 12, 1904, osmic acid, 2 per cent. solution, was injected, ten drops over the infra-orbital foramen and ten drops subcutaneously in the area supplied by the auriculotemporal nerve.

Result.—Partial relief, lasting to the present time.

Cases 8 and 9 were simple subcutaneous injections of osmic acid, 2 per cent. solution, under cocain anesthesia. The injection, in each instance, was into the infra-orbital and mental foramen. The results were unsatisfactory.

CHANGES PRODUCED IN THE TISSUES BY OSMIC ACID.

Frankel[12] of Hamburg found, experimentally in animals, destruction of axis cylinders and degeneration of white substance with epineuritis and myositis as the result of his injections.

Murphy found, on microscopic examination, the most important changes at and distal to the point of injection. The degree of pathologic alteration varied to a considerable extent, dependent on the thoroughness of the injection and whether infection had resulted. At the point of injection there was always more or less staining of the perineurial and interstitial fat with the osmic acid. There was marked derangement of the fibers. The inflammatory reaction was always less extensive than might naturally be expected. An occasional area of focal necrosis, a few foci of round-cell infiltration, and here and there a leucocyte, attracted thither by the foreign substance, were all that was to be noted.

Distal to the point of injection the nerve trunk, in some cases, seemed atrophic, but there was no interstitial changes. Proximally, no changes were to be found except in the immediate vicinity of the injection. At and distal to the point of injection, there was more or less extensive fatty degeneration of the myelin sheath. This varied in amount from the involvement of all the fibers to degeneration of an occasional fiber only. Proximally, the myelin sheath was unaffected except immediately above the limit of blackening, which was the means of defining the extent of the injected area.

INVESTIGATION[13] INTO THE NATURE OF THE TISSUE CHANGES PRODUCED BY OSMIC ACID.

EXPERIMENT 1.—Adult rabbit.

April 2, 1905.—Injected into deep tissues of left hind leg five drops of a 2 per cent. solution of osmic acid freshly prepared. Rabbit allowed to go free ten days. No paralysis developed. No clinical changes.

April 13.—Exposed left sciatic nerve and injected five drops of a 2 per cent. solution osmic acid directly into substance of nerve. Nerve and surrounding structures blackened. Skin incision closed with catgut sutures.

April 15.—Paralysis developed, which continued until rabbit was killed.

April 26—Chloroformed.

EXPERIMENT 2.—Puppy, four months old.

August 13.—Injected left sciatic nerve with a 2 per cent. solution freshly prepared osmic acid. Five drops injected with very little loss of acid into surrounding structures. Nerve at once blackened by acid. Suture closed by catgut.

August 15.—Paralysis developed. Dog carried foot.

August 18.—Paralysis improved.

August 20.—Paralysis practically disappeared. Nutrition good.

August 20.—Dog killed by chloroform.

EXPERIMENT 3.—Small rabbit, three months old.

August 14.—Injected both sciatic nerves with a 2 per cent. solution of osmic acid, using five drops to each nerve. Some acid lost in surrounding tissues. Nerves and surrounding tissues blackened by acid at time of injection.

August 15.—Paralysis of both legs.

August 17.—Continued paralysis. Rabbit dragged legs. Nutrition poor.

August 18.—Rabbit died with paralysis persistent. Wounds not infected.

EXPERIMENT 4.—Adult rabbit.

August 14.—Left sciatic nerve injected with a 2 per cent. solution osmic acid. Nerve and surrounding tissues blackened.

August 16.—Paralysis developed.

August 18.—Paralysis continued. Sutures catgut still *in situ*. Wound infected

August 20.—Rabbit killed by chloroform.

EXPERIMENT 5.—Large rabbit.

12. Practitioner, 1885, vol. i, p. 45.

13. Made, under the author's directions, by Dr. Everett E. Padgett.

August 13.—Injected both left sciatic nerves and cords of right brachial plexus with a 2 per cent. solution of osmic acid, using five drops in each injection. Skin sutured with catgut.

August 15.—Developed slight paralysis of left hind leg, which improved before rabbit was killed. No paralysis in fore leg.

August 20.—Rabbit killed by chloroform.

EXPERIMENT 6.—Large rabbit.

August 20.—Injected both sciatic nerves and also deep muscles of fore leg with a 2 per cent. solution of osmic acid. Wounds closed with catgut. Nerves blackened.

August 23.—Paralysis of both hind legs. No paralysis of fore legs. Wound on left hind leg infected.

POSTMORTEM, GROSS AND MICROSCOPIC EXAMINATIONS.—Parts of tissue were removed from the various organs, hardened in formalin, and stained after the following methods:

A. GENERAL STAINS.—1. Hematoxylin and eosin, the eosin being very heavy. 2. Borax carmine. 3. Van Giesen.

B. SPECIAL STAINS.—1. Nerves. *a*. Myelin sheath stains. *aa*. Paul Weigert's. *b*. Stain for neuroglia fibers. *bb*. Phosphotungstic-acid hematoxylin.

EXPERIMENT 1—GROSS ANATOMIC FINDINGS.

NERVE, LEFT SCIATIC.

	At Site of Injection.	Proximal.	Distal.
Size	Diminished in caliber	Diminished	Diminished
Color	Very dark	Gradually becoming lighter	Gradually becoming lighter
Consistency	Softer than normal	Softer than normal	Softer than normal

SURROUNDING TISSUES.

	At Site of Injection.	Proximal.	Distal.
Color	Dark brown	Shading to normal	Shading to normal
Infection	Absent	Absent	Absent
Inflammatory nodules	Present	Present	Present

OTHER ORGANS.

The voluntary muscles were inflamed at the site of the injection and also proximally and distally. The heart, liver, lungs and spleen were normal.

MICROSCOPIC FINDINGS.

NERVE, LEFT SCIATIC.

	At Site of Injection.	Proximal.	Distal.
Perineurial fat	Stained	Stained	Stained
Axis cylinder	Normal	Normal	Normal
Myelin sheath	Degenerated	Degenerated	Degenerated
Nodes of Ranvier	Stain less plainly	Stain less plainly	Stain less plainly
Caliber	Diminished	Diminished	Diminished
Focal necrosis	Present	Present	Present
Staining qualities	Less than normal	Less than normal	Less than normal

OTHER ORGANS.

The heart showed myositis and round celled infiltration. The liver and spleen were normal; the muscles about the site of injection showed inflammatory changes.

EXPERIMENT 2.—GROSS ANATOMIC FINDINGS.

NERVE, LEFT SCIATIC.

	At Site of Injection.	Proximal	Distal.
Size	Diminished in caliber	Diminished	Diminished
Color	Very dark	Lighter in color	Lighter in color
Consistency	Softer than normal	Softer	Softer

SURROUNDING TISSUES.

	At Site of Injection.	Proximal.	Distal.
Color	Dark brown	Shading to normal	Shading to normal
Infection	Absent	Absent	Absent
Inflammatory thickening	Absent	Absent	Absent

OTHER ORGANS.

The voluntary muscles were inflamed at all points; the heart showed myositis; the liver was normal.

MICROSCOPIC FINDINGS.

NERVE, LEFT SCIATIC.

	At Site of Injection.	Proximal.	Distal.
Perineurial fat	Stained	Stained	Stained
Fibers	Normal	Normal	Normal
Myelin sheath	Slight	Slight	Slight
Nodes of Ranvier	Stain poorly	Stain poorly	Stain poorly
Caliber	Diminished	Diminished	Diminished
Focal necrosis	Very slight	Very slight	Very slight
Staining qualities	Less than normal	Less than normal	Less than normal

OTHER ORGANS.

The heart showed myositis; the liver was normal. Muscles at site of injection, showed inflammatory changes; striated muscle of opposite leg was normal.

EXPERIMENT 4.—GROSS AUTOMATIC FINDINGS.

NERVE, LEFT SCIATIC.

	At Site of Injection.	Proximal	Distal.
Size	Diminished	Diminished	Diminished
Color	Very dark	Lighter	Lighter
Consistency	Softer than normal	Softer than normal	Softer than normal

SURROUNDING TISSUE.

	At Site of Injection.	Proximal.	Distal.
Color	Dark brown	Lighter	Lighter
Infection	Present	Present	Present
Inflammatory exudate	Present	Absent	Absent

OTHER ORGANS.

The heart, liver and spleen were normal.

MICROSCOPIC FINDINGS.

NERVE, LEFT SCIATIC.

	At Site of Injection.	Proximal.	Distal.
Perineurial fat	Stained	Stained	Stained
Axis cylinder	Normal	Normal	Normal
Nodes of Ranvier	Stain less plainly	Stain less plainly	Stain less plainly
Caliber	Diminished	Diminished	Diminished
Focal necrosis	Absent	Absent	Absent
Staining quality	Less than normal	Less than normal	Less than normal

OTHER ORGANS.

The heart showed myositis; the liver was normal; the muscle at site of injection was degenerated.

EXPERIMENT 5.—GROSS ANATOMIC FINDINGS.

NERVE, BRACHIAL PLEXUS.

	At Site of Injection.	Proximal.	Distal.
Size	Diminished in caliber	Diminished.	Diminished
Color	Very dark	Becoming lighter	Lighter
Consistency	Softer than normal	Softer than normal	Softer than normal

SURROUNDING TISSUE.

	At Site of Injection.	Proximal.	Distal.
Color	Dark brown	Disappearing	Disappearing
Infection	Absent	Absent	Absent
Inflammatory exudate	Present	Present	Present

OTHER ORGANS.

The heart showed myositis; the liver, lungs and other muscles were normal.

MICROSCOPIC FINDINGS.

NERVE, BRACHIAL PLEXUS.

	At Site of Injection.	Proximal.	Distal.
Perineurial fat	Stained	Stained	Stained
Axis cylinder	Normal	Normal	Normal
Nodes of Ranvier	Stain less plainly	Stain less plainly	Stain less plainly
Caliber	Diminished	Diminished	Diminished
Staining quality	Less than normal	Less than normal	Less than normal

OTHER ORGANS.

The heart showed myositis; the liver was normal; the muscles about the site of injection showed inflammatory changes.

EXPERIMENT 6.—GROSS ANATOMIC FINDINGS.

NERVE, BOTH SCIATICS.

	At Site of Injection.	Proximal.	Distal.
Size	Diminished in caliber	Diminished	Diminished
Color	Very dark	Lighter	Lighter
Consistency	Softer than normal	Soft	Soft

SURROUNDING TISSUES.

	At Site of Injection.	Proximal.	Distal.
Color	Dark brown	Disappearing	Disappearing
Infection	Present	Present	Present

OTHER ORGANS.

Voluntary muscles.	Inflamed	Absent	Absent

The heart showed myositis; the liver and spleen were normal. In the brain, examination of the corpora quadrigemina, the cerebral cortex and the medulla oblongata, showed them to be normal. The color of the deep structures of fore leg was very dark, involving muscle tissue, tendons, ligaments and periosteum, but infection and inflammatory changes were absent.

MICROSCOPIC FINDINGS.

NERVES, BOTH SCIATICS.

	At Site Injection.	Proximal.	Distal.
Perineurial fat	Stained	Stained	Stained
Axis cylinder	Normal	Normal	Normal
Myelin sheath	Stains poorly	Stains poorly	Stains poorly
Caliber	Diminished	Diminished	Diminished
Focal necrosis	Focal necrosis	Focal necrosis	Focal necrosis
Staining quality	Less than normal	Less than normal	Less than normal

OTHER ORGANS.

In the brain the corpora quadrigemina; the medulla oblongata and the cerebral cortex were normal. The heart and liver were normal. In the muscles at the site of injection the tissues were dark; the nuclei, clearly visible; the sheath of muscle fibers, visible; the protoplasm, stained poorly, the different parts could not be made out; inflammatory changes were present. The tendons showed inflammatory changes.

CONCLUSIONS.

1. The injection of 10 drops of osmic acid in 2 per cent. solution into sensory nerve trunks is safe. The likelihood of irritation of the kidney, however, should not be forgotten in cases exhibiting kidney lesions. It is not probable that the death from cerebral hemorrhage three months after injection of the acid was due in any sense to the injection.

2. Injections into the inferior dental or other nerves should be made through the mouth, since infection of the wound and necrosis may result, with consequent failure in the action of the acid.

3. Immediate relief should not always be expected, notwithstanding the cases of Bennett and Murphy were all immediately relieved. No one of my cases, even those in which the acid was accurately injected into the nerve trunks and into the perineurial fat, was promptly relieved, relief coming in from one to two weeks. The observations on this point of Wright, who had a large experience with osmic acid injections, correspond to mine.

4. There is very little doubt that the stretching of the nerve trunk, necessarily incident to the injection, is productive of good, supplementing, as it must, the action of the acid. There is, therefore, no good reason why the stretching should be avoided intentionally, except perhaps for experimentation.

5. In the case of small nerves, it will be found exceedingly difficult to inject directly into the nerve trunk, that is, the needle eye will pass to the distal side of the thread-like nerve, or perhaps not enter the nerve substance at all. Or, notwithstanding the utmost care, the fibers may be so teased apart by the needle point that the fluid will simply be spilt about the nerve. In such a case, in order to bring the acid in contact with all of the fibers, it is wise to clip the nerve so that the end may be bathed in the fluid.

6. The effect of manipulation of the nerve, as by stretching, has not as yet been eliminated as a possible aid to the chemical action of the osmic acid; therefore, a general anesthetic should be administered so that neurectasy or section of the nerve may be done if desired.

7. My experiments have shown no changes in the nerve tissues as the result of injections of osmic acid other than the disintegration of fat and oil globules in the perineurial space and in the white matter of Schwann, such white matter of Schwann being simply fatty matter in a fluid state insulating and protecting the essential part of the nerve. The degenerations appearing in the nerve itself are only such as may be fairly attributed to nutritional changes and exposure, the indirect result of the selective action of osmic acid of destroying fat. There is no reason why this fat should not be restored and the nerve again become capable of transmitting sensation, that is, theoretically, the neuralgia may return after injections of osmic acid.

8. Osmic-acid injections are uncertain in effect as to the cure or relief of neuralgia.

9. A large percentage of cases of neuralgia will be relieved for months by osmic-acid injections.

10. The injection of osmic acid for the relief of tic douloureux is justifiable, even if it should become necessary to repeat the injections at intervals of a few months, particularly in view of the unfavorable results of the so-called radical operations.

11. The local irritation produced by the acid and the remote toxic and irritant effects are not serious in their consequences and have no meaning as to the effect of the osmic acid in relieving neuralgia.

12. The solution of osmic acid should be made fresh for each operation, as deterioration is rapid.

13. Pain persisting several days in a small circumscribed area means that the filaments supplying this area have not been acted on by the acid. The acid usually finally destroys such filaments. It may become necessary, however, to reopen a wound for the purpose of injecting such filaments.

14. Mere subcutaneous injections are of little or no value.

Value of Society Meetings.—The art of medicine is important, but in these days of scientific accuracy in diagnosis, the microscope and test-tube and *x*-ray, can not be ignored even by the busiest of men, as by their careful use mistakes are prevented and injustice to our clientage avoided. It is in journals and books and medical societies that knowledge and familiarity with what is now in medicine must be learned, and wise is the doctor who early discerns that a membership in an active medical association is one of the best means of keeping in touch with the best, both of science and of men, that is worth knowing in his profession.—A. W. Hurd, in *Buffalo Medical Journal.*

SOME STUDIES IN METABOLISM OF CANCER PATIENTS AS COMPARED WITH NORMAL INDIVIDUALS.

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In this paper it is proposed to review and summarize previous work on nitrogen and chlorin metabolism, and then to give in detail experiments carried out, at the suggestion and under the direction of Dr. Clowes, on a normal individual and on several cancer patients, and to compare the results of such experiments.

SUMMARY OF THE PREVIOUS WORK.

Much of the previous work loses in value because of the lack of accurate data recording quantities of nitrogenous food and chlorids ingested, quantity of nitrogen and chlorids excreted through the feces, body weight, etc. One very important source of error in the determination of chlorids is the change from solid to liquid food, especially the substitution of a milk diet for the normal solid food. The ratio of chlorids to proteid matter in milk is smaller than in solid food as usually consumed; hence, with milk one expects a reduced chlorid ingestion and reduced chlorid excretion.

The literature for the last twenty-five years shows divergent views on the equilibrium of nitrogenous bodies and chlorids in cases of impaired metabolism. Vogel,[1] Rommelaire,[2] Jacoby[3] and others noted marked disturbances in excretion of urea and chlorids in cachectic cancer patients, but did not carry out exact experiments to determine the amount of food stuff consumed as compared with the waste products excreted. Müller[4] and Klemperer[5] concluded that, under the influence of the toxic excretions from tumors, the amount of nitrogen excreted was in excess of the amount ingested, while Moraczewski finds the converse to be true. Similar differences of opinion exist as to the retention and excretion of chlorids.

A paper[3] published by Jacoby in 1887 is one of the first records of work of real value. He compared the daily nitrogen excretion of a normal individual with that of a patient suffering from carcinoma of the liver, and found that, while the normal individual gained weight with a nitrogen excretion of less than 12 gms. daily, the cancer patient lost weight with an excretion of 18 gms. daily. The next work of value was done by Müller,[6] who studied the conditions of metabolism in 9 cancer patients. He concluded that there was a continued loss of nitrogen from the system in spite of the rapid growth of the tumor, that the loss of body weight corresponded to the loss of nitrogen when the influence of edematous fluids was considered, and that where nutritive processes were seriously affected by the tumor the ratio of the nitrogen in the excreta to the nitrogen in the food was similar to that in starving individuals.

G. Klemperer[5] concludes, from a series of fairly exact metabolic experiments, that when cancer and normal individuals are subject to the same experimental conditions the former will lose and the latter may gain in body proteid.

Laudenheimer[7] took five cancer patients and found that two maintained equilibrium of chlorids, while in two the chlorids excreted were below the amount ingested; he concluded that this was the result of nephritic or circulatory retention of water and salt.

Schöpp[8] says that, while both chlorid and nitrogen excretion frequently fall below the amount assimilated in cancer patients, the difference may be attributed to ulceration of the tumor, the secretion containing considerable quantities of chlorid.

Böhne[9] found in a marked cachectic cancer patient a daily retention of 3 to 4 gms. of chlorid for a period of four weeks, and further claims that a chemical analysis revealed four times the amount of chlorid normally found in the liver.

Braunstein[10] carried out a series of analyses of urine in ten cancer patients, in five of which an exact record had been kept of the chlorid and nitrogen content of the diet. In three of the five patients a loss of nitrogen was observed, being particularly marked in a patient suffering from cancer of the esophagus, where the loss reached as much as 10.6 grams per day for a period of four days. He failed to find any marked difference between the chlorid contained in the food and in the excreta.

A review of this literature will impress one with the great variations in the results obtained. Some have observed a gain in nitrogen on the part of the system, which they attribute to the rapid growth of the tumor; others have noted a distinct loss of nitrogen, which they have supposed was due to the action of toxic substances produced in and excreted from the tumor. In any case, the discrepancies observed would justify further investigation in this direction.

While a diminished excretion of chlorids has frequently been observed in cancer patients, few of the early writers noted the fact that in many of the experiments, milk having been substituted for solid food which could not be assimilated, the chlorid ingestion was necessarily reduced. Therefore, it would be a wrong deduction to say that chlorids were retained.

A complete review of the literature bearing on this subject may be found in the Fifth Annual Report of the New York State Cancer Laboratory.

OBJECTS OF THIS STUDY.

The main objects of our investigations have been as follows:

1. To determine whether the gain or loss in weight of a cancer patient was associated with a corresponding gain or loss of nitrogen from the system and to compare these results with those obtained from the study of a normal individual.

2. To determine whether chlorid is retained in the system, by comparing the amount assimilated with the amount excreted, and, if so retained, to what extent.

3. To determine whether the chlorid retained in the system has any direct relationship with the supposed increase of chlorid in the blood and with the formation of edematous deposits.

4. To study the effect of adding or totally excluding chlorid from the diet as compared with the effect of such treatment on a normal individual.

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METABOLISM EXPERIMENTS.

Case 1. Normal Individual.—In order to note the influence of varying quantities of chlorid on normal metabolism, it was determined to carry out a series of experiments on one of ourselves. For two periods of thirteen and nine days, respectively, experiments in feeding were carried out on Dr. G., physician, age 32, weight 66 kilo, health normal. During this time an accurate record was kept of all food and liquid consumed, and of all feces and urine passed and samples of food, liquid, feces and urine taken to the Gratwick Laboratory for accurate chemical analysis. Data were kept of daily weight and exercise. The first five days were devoted to determining the nitrogen equilibrium. It was found that body weight remained constant when the food ingested during twenty-four hours contained from 13 to 14 grams of nitrogen.

For the remainder of the period the amount of nitrogen was varied in quantity; this change, however, affected the body weight far less than the change in the quantity of chlorid. When the nitrogenous food was largely increased in quantity, a portion of the excess was passed by the bowel and the kidneys, the remainder being apparently retained by the system.

TABLE I.

Date.	N in Food.	N in Ur. and Fec.	NaCl in Food.	NaCl in Ur. and Feces.	Body weight in Klg.	Uric Acid.	Ammonia.
First Period.							
Jan. 24-25...	14.0	14.1	...	...	65.9	.58	..
Jan. 25-26..	15.3	15.0	...	...	65.1	..	..
Jan. 27-28...	12.4	13.5	7.9	8.1	65.4	.33	.87
Jan. 28-29...	15.5	13.7	8.1	7.9	66.1	.34	.80
Jan. 29-30...	13.9	15.9	27.6	20.0	66.4	.74	.63
Jan. 30-31...	13.9	14.2	23.0	23.6	66.5	.51	.81
Jan. 31-Feb.1.	17.6	14.6	12.1	17.6	66.1	.46	.76
Feb. 1-2....	13.0	13.1	2.0	9.5	65.1	.33	.78
Feb. 2-3.....	9.1	11.3	1.3	3.8	64.3	.36	.60
Feb. 3-4.....	5.1	9.2	9.3	5.4	64.7	.46	.56
Second Period.							
Mar. 30-31..	12.2	10.7	...	...	66.7	.48	..
Mar.31-Apl.1.	15.4	17.6	32.2	26.5	66.7	.67	.91
April 1-2....	12.8	13.2	30.3	27.8	67.5	.52	.83
April 2-3....	14.0	14.1	7.8	12.8	67.0	.43	.97
April 3-4....	11.4	13.9	6.5	9.7	66.7	.46	.76
April 4-5...	11.6	13.9	4.1	6.8	66.4	.47	.84
April 5-6....	12.1	12.8	6.6	6.3	65.8	.38	.69
April 6-7....	8.2	11.3	13.7	10.6	65.7	.43	.82
April 7-8....	6.6	11.3	3.8	7.6	66.0	.35	.57

During the last two days of the first period the proteid food was reduced to a considerable extent, the results of which follow:

When the nitrogen ingested was reduced from 13.5 to 9.0 gms., the nitrogen excreted fell from 13.5 to 11.3 gms., whereas a further reduction to 5.1 gms. ingested led to an excretion of 9.3 gms. These figures show that a proportionate loss of nitrogen by the body follows a reduction of nitrogen in the food, but that the actual reduction in the excreta is only about one-half the actual reduction in the food.

During the second period constant body weight was maintained with an average daily consumption of 13.6 gms. nitrogen. A study of the last two days of this period, during which the patient was once more subject to partial starvation, shows that about the same ratio exists between the intake, output and loss of nitrogen, as in the previous starvation period. In other words, it became apparent that when the nitrogen of the food is rapidly reduced to a point below the normal, the loss on the part of the body required to compensate for this difference is not equal to the amount in question, but only to about one-half.

It was not deemed advisable to carry the reduction of nitrogen in the food beyond this point. The figures obtained indicate that the amount of nitrogen lost daily in a state of absolute starvation would be about 6 gms., or .1 gm. per kilo.

The study of the influence of varying quantities of sodium chlorid on elimination and body weight is very interesting. Under normal conditions the amount of sodium chlorid consumed lay between 7.5 and 8 gms. per day. When the ingestion of NaCl was increased from 8 to 27.6 gms. the total excretion was 20 gms., showing a gain of 7.6 gms. by the body. The following day the consumption of 22.9 gms. NaCl was followed by the excretion of 23.6 gms., a practical balance being established on this day. The next day, when 12 gms. only were consumed, a total of 17.6 gms. was eliminated, showing the tendency of the body to recover chlorid equilibrium, but the following day, when only 2 gms. were ingested and 9.5 gms. excreted, the body suffered a decided loss in chlorid, which was continued on the next day, when only 1.3 gms. being ingested 3.78 gms. were excreted. The following day ended the experiment with an ingestion of 9.2 gms. and a loss of 5.3 gms., showing a tendency of the system to replace chlorid previously lost. The results of chlorid experiments in the second period were very similar to those just mentioned.

The effect of large daily consumption of chlorid on the excretion of nitrogen is marked, the maximum excretion of nitrogen occurring at the same time as the maximum excretion of chlorid.

The curve representing body weight follows almost exactly the curve showing consumption of chlorid. The total loss of weight between the maximum and the minimum points, about 2 kilos, was accompanied by a loss of chlorid amounting to about 15 gms., which would fully account for that difference in weight, assuming that a .75 to .8 per cent. sodium chlorid solution is isotonic with the serum. The second period showed an even more exact ratio between chlorid ingested and body weight.

The loss of nitrogen during this period had an insignificant effect on the body weight as compared with the variation in chlorids.

The volume of water ingested shows a preponderance over that excreted by the kidneys of from 500 to 600 c.c. During the time when the greatest quantity of chlorid was ingested the intake of water was about two liters, while the urine passed was 1,300 c.c., the specific gravity never rising above 1023 to 1022. Only when the chlorid in the diet was reduced to a minimum did the urine excreted equal the water ingested.

We, therefore, see that the variations in body weight follow closely the variations in amount of chlorid ingested and excreted, the amount of water held in the system being directly affected by the amount of chlorid retained. A period of not longer than forty-eight hours is required to establish chlorid equilibrium, which is more readily effected than in pathologic cases.

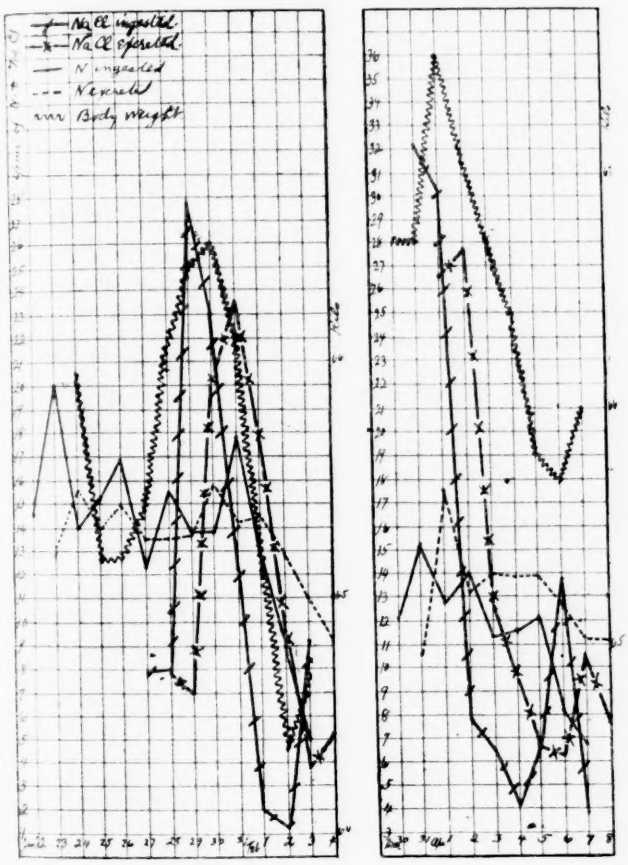
Effect of variations in the amount of chlorid on other constituents of the urine: When the quantity of chlorid ingested was very high, there was a large volume of urine passed, a slight rise in nitrogen excretion, an increase in the phosphates, and a very large excess of uric acid, with a slight decrease in the ammonia. This excess of uric-acid excretion might be due to an increased destruction of nuclei of cells or a more complete removal of uric acid already existing in the blood. This latter theory is in accord with the results published by Dr. Clowes relating to the freezing point of urine, which indicate a probable relationship between the excretion of small ions and of large complexes, such as uric acid.

Case 2. Carcinoma of Pylorus.—J. W., age 75, weight 51 kilos. He experienced difficulty in taking food for months past; he became emaciated and cachectic. When

inspected and palpated a prominent tumor was revealed in the epigastrium. Autopsy showed carcinoma of pylorus.

Examinations were made of twenty-four-hour samples of urine and feces for a period of twelve weeks; for the last eight weeks preceding death estimation was made of total nitrogen and chlorid in the food in order to obtain a comparison of nitrogen and chlorid in food and excreta and to determine the influence of varying proportions of NaCl in the diet.

A glance at Table 2 shows that equilibrium in nitrogen and chlorid was maintained during the first two weeks, the body weight remaining constant. Then began a loss in nitrogen with a retention of chlorid, amounting during the last two weeks of life to 33.7 gms. of nitrogen lost and 22.8 gms. of NaCl retained, or 80 per cent. of



NaCl ingested was retained. During one week the ingestion of NaCl was increased to 17.9 gms. in the hope of eliminating chlorid, the products of metabolism and suboxidized products. The only result was increased edema on the part of the patient. A portion of the chlorid was undoubtedly retained in the system in the increased fluid of the body, but, unlike the normal individual cited, the kidneys did not pass off the excess of chlorid in from twenty-four to forty-eight hours. Possibly the retention of chlorid was due to new chlorid compounds formed by the suboxidized nitrogenous bodies.

TABLE 2.

Date.	N in Food.	N in U. and F.	Loss or Gain of N.	Cl in Food.	Cl in U. and F.	Loss or Gain of Cl.
Feb. 4-11.....	45.0	49.0	—4.0	11.8	11.7	+ .1
Feb. 11-18.....	46.4	42.4	+4.0	14.2	13.3	+ .9
Feb. 18-26.....	36.5	50.6	—14.1	13.0	10.2	+ 2.8
Feb. 26-Mar. 5..	32.9	40.2	—7.3	8.8	4.7	+ 4.1
March 5-12.....	45.9	50.4	—4.5	12.2	4.0	+ 8.2
March 12-19.....	38.1	56.0	—17.9	13.2	6.0	+ 7.2
March 19-26.....	30.0	40.9	—10.9	17.8	2.0	+15.8
March 26-Apl. 2.	21.6	44.4	—22.8	8.5	1.5	+ 7.0

The patient received an average of 1.66 gms. NaCl per day, and he was unable to maintain equilibrium even with this very low ingestion. During the week when NaCl was increased to 17.8 gms., 15.8 gms. were retained in the system, the body weight going up to 1.25 kilos in spite of the loss of nitrogen, which was less marked than during other periods, probably due to retention of nitrogenous products in the edematous fluids.

This case, in which the N equilibrium of a patient weighing originally 51 kilos was maintained for a space of 14 days at 6.5 gms. and in which for the entire period of eight weeks, during which accurate observations were made, the average N excretion was only 6.7, affords further evidence in support of the work recently published by Professor Chittenden showing the possibility of maintaining a N equilibrium on a low amount of N for many months in a series of normal individuals.

When the interference with the nutrition caused by toxic or other influences resulting from the tumor are considered, it is remarkable that the loss of N suffered by the body should be as low as is frequently found to be the case in these and other similar series of experiments.

Case 3. Carcinoma of Esophagus and Liver.—Mr. U., aged 60, weight 75 kilos. The diagnosis was made during life and confirmed at autopsy by finding three inches of esophagus above the diaphragm a cancerous mass with metastasis to stomach and liver. The patient was fed through a fistulous opening.

For a period of six days exact analyses were carried out on the food to determine the nitrogen and chlorid equilibrium and the effect of increased and diminished feeding of NaCl.

TABLE 3.

Date.	N. in food.	N in U & F.	Cl of food as NaCl.	Cl of U & F as NaCl	Ur. acid.
Oct. 20-21.....	9.58	8.11	.98	3.88	.46
Oct. 21-22.....	9.02	9.20	1.73	3.25	.45
Oct. 22-23.....	9.04	7.63	1.88	1.49	.35
Oct. 24-25.....	9.74	9.28	8.20	3.43	.38
Oct. 25-26.....	9.73	8.50	9.89	7.96	.70
Oct. 26-27.....	9.43	8.10	9.95	6.70	.52

A study of the accompanying table shows an average retention in the system of 1 gram of nitrogen daily, which may be explained by improvement in bodily nutritive processes or by the retention of nitrogen in the edematous fluids. Here, however, the retention was the same for both periods, while chlorid and water were retained only during the latter period.

During the first three-day period, when the consumption of chlorid was very low, the excretion of urine was high, averaging two liters per day, but when the chlorid consumption was increased the total volume of urine excreted was less than four liters, showing a retention of fluids and the production of edema. An estimation of the total chlorid ingested and excreted shows a tendency on the part of the system to retain a small portion of chlorid.

This patient, in the absence of marked toxic symptoms, showed practical equilibrium of nitrogen with a slight retention of chlorid.

Case 4. Carcinoma of Right Kidney.—Mr. T., aged 66. Autopsy revealed primary carcinoma of right kidney with secondary tumors in liver.

TABLE 4.

Date.	N in food.	N in exer.	Cl in food as NaCl.	Cl in exer. as NaCl.
8-9.....	5.1	8.3	2.0	.32
9-10.....	5.1	8.6	2.0	.32
10-11.....	5.1	10.5	2.0	.62
11-12.....	2.6	3.9	1.0	.08
12-13.....	5.1	5.4	2.0	.33
13-14.....	5.1	6.3	3.6	.55
14-15.....	5.1	6.8	3.6	.82
15-16.....	5.1	7.1	2.0	.45
16-17.....	2.6	4.5	1.0	.10
Total	40.9	61.4	19.2	3.59

For nine days preceding death exact chlorid and nitrogen determinations were made of food and excreta. A slight increase of chlorid for two days was not associated with any marked increase in the excretion of urine, but did cause edema and cachexia. A continued loss of nitrogen was noted in this case, and a strong tendency to retention of chlorid.

Case 5. Sarcoma.—Mr. C., aged 75. Sarcoma of skin and connective tissue in right epigastric region, having a maximum diameter of six inches. Patient refused operation and left the hospital at the completion of the feeding experiments covering twelve days. Accurate determinations of food were carried out on only two days, the remaining days being approximates.

TABLE 5.

Day.	Total N. of food.	—Nitrogen of— Urine.	Feces.	NaCl in food.	—NaCl in— Urine.	Feces.
1	.....	9.4	....	.....	....	....
2	.....	7.3	....	.....	....	....
3	.....	9.4	....	.....	....	....
4	.....	10.7	....	.....	....	....
5	.....	8.1	....	.....	....	....
6	.....	10.1	....	.....	....	....
		55.0	10.50			
Totals,	69.0 to 71.0*	65.5				
7	.....	10.1	....	.....	8.2	†
8	.....	9.0	....	.....	6.7	†
9	.....	9.3	....	.....	8.1	†
10	.....	9.1	....	.....	8.2	†
11	.....	9.8	....	.....	8.2	†
12	.....	10.5	....	.....	9.5	†
		57.8	9.7			
Totals,	69.0 to 71.0*	67.5		46.0 to 48.0*	48.9	

*Approximately.
†Only traces, and so disregarded.

In this case, although a tumor existed and toxic symptoms were manifested, the patient retained a small amount of nitrogen, and the variations in the amount of chlorid excreted corresponded with the variations in body weight, as in the normal case already cited.

Case 6. Carcinoma of Vulva.—Mrs. N., aged 58. Tumor of right vulva, extending to vagina and cervix. Patient emaciated and cachectic.

Although experiments were carried out for forty-five days on the urine and twenty-four days on the food, only those of the last six days can be considered approximately correct. During this period there was a loss of 5.6 gms. of nitrogen and a gain of 1.9 gms. of chlorid which was scarcely comparable with a body loss of .75 kilo.

Case 7. Cardio-spasmus.[11]—P. G., aged 59. Inability to swallow solid food. After a gastrostomy was performed he was fed through a tube for a fortnight. He subsequently died of pneumonia.

TABLE 7.

SERIES A.

Day.	N. in food.	N. in excreta.	NaCl in food.	NaCl in excreta.
1.....	12.5	15.7	5.5	4.8
2.....	11.4	18.6	4.2	4.3
3.....	12.3	16.6	6.3	6.4
4.....	12.8	17.7	4.3	5.7
5.....	12.6	16.9	6.8	6.9

SERIES B.

Day.	N. in food.	N. in excreta.
1.....	14.0	14.3
2.....	13.6	10.4
3.....	13.4	15.9
4.....	13.9	13.3

A series of nitrogen and chlorid determinations was carried out on this patient. During the first five days there was a decided loss of nitrogen, due possibly to the shock and the toxic effects of an infection which developed at the point of introduction of the tube. A subsequent determination of nitrogen showed a maintenance of equilibrium. The considerable loss of N in the first period attributable to the toxic influence of an infection was far more marked than the loss of N due in other cases to cancer cachexia. There was no retention of chlorid to any extent, a fair equilibrium being maintained, and no edema being present.

Case 8. Stricture of Esophagus (supposed to be carcinomatous).—L. L., aged 44. In order to compare the nitrogen and chlorid metabolism of this case with those known to be carcinoma, experiments were carried out for two weeks.

TABLE 8.

PERIOD 1.

Nitrogen of food.	Nitrogen of excreta.
13.0	14.6
13.0	13.1
14.2	15.2
15.5	14.5
15.5	14.4
15.5	16.2

PERIOD 2.

Nitrogen of food.	Nitrogen of excreta.	NaCl of food.	NaCl of excreta.
11.4	13.3	12.3	11.2
10.7	12.3	11.7	12.4
10.7	12.3	11.7	9.4

PERIOD 3.

Nitrogen of food.	Nitrogen of excreta.	NaCl of food.	NaCl of excreta.
16.8	14.8	11.7	9.5
16.8	17.6	11.7	11.9
16.9	15.6	11.7	10.9
17.0	13.6	...	...
17.1	14.6	...	...

During the first six days a fairly accurate nitrogenous equilibrium was maintained, while a slight retention of chlorid was manifested, although these results were not as accurate as the nitrogen determinations. During the next period of three days the nitrogen of the food was reduced to 10.9 gms. daily which resulted in an average loss of 1.7 gms. daily, while the chlorid was maintained at a fairly high leved, .9 gm. being retained by the system. During the third period the nitrogen in the food was increased to from 16.8 to 16.9 gms. daily, resulting in a retention of nitrogen. The patient gained weight and showed marked improvement with a diet containing 16 gms. of nitrogen. During three days of this period chlorid equilibrium was maintained very well, 11.7 gms. in the food being followed by a loss of 11.1 gms. in the urine.

A source of experimental error which may be mentioned is the loss of nitrogen and chlorid by the skin, which, if taken into account, might rectify small differences between ingestion and excretion. The small amount of work which has been done along this line indicates a normal loss per day of from .1 to .2 gm. of nitrogen and from .2 to .3 gm. of sodium chlorid.

SUMMARY OF DATA.

The following table gives the average of chlorid and nitrogen of food and excreta in normal, cancer and doubtful cases.

TABLE 9.

Case.		N. of food.	N. of excreta.	NaCl of food.	NaCl of excreta.
1. Normal	a	13.0	13.4	11.4	11.9
	b	11.6	13.2	13.2	13.5
2. Carcinoma of stomach and pancreas	a	6.5	6.5	1.85	1.8
	b	5.5	6.7	1.6	.9
	c	4.3	6.7	1.9	.45
3. Carcinoma of esophagus involving stomach and liver.....		9.4	8.5	5.4	4.45
4. Carcinoma of kidney...		4.5	6.8	2.1	.4
5. Sarcoma of skin and connective tissue ...		11.5	11.1	7.8	8.1
6. Epithelioma of uterus, etc.		8.1	9.0	6.0	5.7
7. Cardio-spasmus (infection)	a	12.3	17.1	5.4	5.6
	b	13.7	13.5	...	...
8. Esophageal stricture (cause undetermined)	a	14.4	14.7	...	...
	b	10.7	12.6	11.9	11.0
	c	16.9	15.2	11.7	10.8

11. A diagnosis of carcinoma of the esophagus was subsequently made.

SUMMARY OF EXPERIMENTAL FEEDING.

Case 1. A normal individual was submitted to partial proteid starvation, while the quantities of chlorid were varied. A loss of nitrogen resulted, while chlorid equilibrium was maintained.

Cases 2 and 4 were suffering from carcinoma and were cachectic. The experiments were carried out until death. There was a constant loss of nitrogen and retention of chlorid, but the loss of nitrogen was but little above the loss sustained by a normal individual in a state of starvation, indicating that this loss was not of necessity due to the toxic influence of the tumor.

Case 3. This patient had positive cancer of the stomach and liver, yet showed, instead of a loss, a retention of nitrogen and the expected retention of chlorid. One source of error was the loss of nitrogen through expectoration. Death prevented a repetition of the experiment.

Case 5. This patient showed how little effect a growing sarcoma had on nutrition, a balance of nitrogen and chlorid for twelve days being maintained.

Case 6. This patient, suffering from epithelioma of the vulva, showed a slight loss of nitrogen and retention of chlorid, the slight loss of nitrogen being possibly explained by the inability perfectly to control the patient for experimental work.

Case 7. This cardio-spasmus patient showed a loss of nitrogen during the first period, probably due to the operation and subsequent infection, and maintained a fair equilibrium of chlorid. During the second period equilibrium of nitrogen was maintained.

Case 8. This patient, suffering from stricture of the œsophagus, due to unknown causes, maintained nitrogen equilibrium on 14 gms. per day, but retained nitrogen when receiving more and lost when receiving less. A slight tendency to chlorid retention existed.

In conclusion, it must be admitted that none of our patients showed an absolutely accurate balance, of body weight, loss and gain of nitrogen and chlorid, increase in weight of tumor, loss of tissue and production of edema. But when we note the loss of nitrogen and chlorid by the skin and mouth and other experimental errors a fair balance may be struck.

A most important conclusion has already been noted in the text, namely, that a healthy individual was able to assimilate enormous quantities of chlorid and strike a balance in from twenty-four to forty-eight hours, while cancer patients showed edema when chlorid consumption was increased, the kidneys being unable to excrete the excess.

The great significance of the rôle played by soluble chlorids in the process of oxidation and elimination of waste products can not be overlooked.

Work of this nature shows the presence in the system of toxic substances capable of interfering to a certain extent with nutritive processes. These toxic bodies are not proved to be specific cancer poisons, but may be suboxidized nitrogenous products.

Nonsectarian Medicine.—Sectarianism in medicine is founded in selfishness and commercialism. It is a stumbling block to the science and art of medicine. The goal of medical science is truth, and the application of truth to the prevention and cure of disease. To the physician all known truth should be available, all plausible theories should be his to prove. No dogma should fetter his choices, no school should select his remedies, no sect determine his methods.—*Columbus Medical Journal.*

CONGENITAL COXA VARA.

HENRY O. FEISS, M.D.
CLEVELAND, OHIO.

E. S., 3-year-old girl, a patient of Dr. O. T. Maynard's of Elyria, was referred to Dr. E. F. Cushing, who kindly referred her to me Oct. 10, 1905.

History.—The family history showed nothing of importance. The mother was well developed and healthy and had several other normal children. Pregnancy was normal. The birth ran smoothly, but at delivery Dr. Maynard noticed that the legs were in a peculiar position. The right one was flexed with the knee pointing outward in the normal way and the lower leg placed across the abdomen, but the left leg, instead of being in a position symmetrical to the right, had its thigh adducted into approximation with the right thigh. The knee was sharply flexed and the lower leg ran parallel to the lower leg of the right side, the foot being turned outward at the ankle. This position having been noted, the doctor drew the legs down and noticed an extreme flexibility at the left hip joint, suggesting congenital dislocation. No ophthalmia was noticed.

After this the child was kept under careful observation, and developed and nursed well, the hip not getting any worse, and treatment was deferred to a later period.

On walking, at about 18 months, the child limped on her left leg, the limp not being very extreme, but noticeable. There never was any sign of inflammation, no abscess, no stiffness, no night cries, no history of injury.

Examination.—The examination showed a well-developed and nourished child, very active, but limping slightly on her left leg. The examination of her shoulders, spine and other joints showed nothing. There was no glandular enlargement, no rosary, no enlarged epiphyses and no other signs of rickets. The examination of the right leg showed nothing. In the left leg the patella was situated higher than in the right.

In the left hip the trochanter was prominent and elevated, being well above Nélaton's line. Motions were not limited except to a moderate degree in abduction and external rotation. On manipulation the head of the bone could not be located out of its socket, but there semed to be a peculiarity about the joint compared to that of the other side, as though the neck had lost its normal angle with the shaft. The left knee was somewhat knocked. There was some pronation at the ankles. Besides this there were no defects nor deformities. Measurements from the great trochanter to the knee joint showed the shafts to be about equal. Measurements of the leg were as follows: A. S. S. to I. M., right 16, left 15½; umbilicus to I. M., right 18¼, left, 17¾; circumference right thigh 10½, left, 10½; circumference right calf 7¼, left 7¼.

Thus there was no atrophy and only one-half inch shortening, apparently due to something wrong about the hip joint. A Roentgen picture was taken which explained the condition. (Fig. 1.) On this the neck of the bone is seen to be shortened and thickened and placed at a right angle to the shaft. The epiphysis is only one-fourth the size of that of the other side. The acetabulum is exactly like that on the right. The pelvis shows nothing wrong and the femoral shaft is not atrophied. The apparent thickening is probably due to the fact that the two legs presented a slightly different angle to the tube. The thigh is in a position of slight adduction.

The evidence in this case is, we believe, sufficient to prove its being congenital. The peculiar position of the thigh, that is, the extreme adduction, and the extreme flexibility noticed right after birth, point to its intrauterine origin.

REVIEW OF LITERATURE.

Kredel[1] was the first to call attention to the possibility of the congenital occurrence of this deformity. He reported two cases. The first case, seen at three years, was a double coxa vara with other congenital deformities of the limbs, namely genu valgum and pes equinovarus. The second case was unilateral coxa vara, genu

1. Kredel: Centralblatt f. Chir., 1896, No. 42.

valgum and pes equino-varus of the same leg, together with absence of the patella, severe genu valgum and pes equino-varus of the other limb. The legs in these two cases lay parallel and adjoining and directed toward the left so that they formed an angle with the trunk of 135 degrees. The left or normal hip was abducted and the right or deformed hip was adducted. He states: "When one has seen this well-nourished and active child taking this position repeatedly, then one cannot doubt the fact that both the legs had been constrained and had grown in this position in utero for a long period."

The next report on this subject is by Zehnder,[2] who reports a double case in which the birth was normal and in which the child walked at the age of one year, but waddled at the very start. There were no other defects or deformities described. The same year Kirmisson,[3] writing on this subject, reported the case of a child nine years old with rachitic deformities. The femoral diaphyses had enormous curves convex anteriorly and exteriorly. These curves were continued into the neck of the bone, producing coxa vara. He also reports two autopsies on rachitic infants shortly after birth, in which the deformities were the same as in his first case.

The next report is by Mouchet and Aubion.[4] They report two cases. The first case was double, with unimportant history and no rickets. Both legs had a total concave bend inward. The second case was single, also without rickets. The authors further call attention to a radiograph of a hip of a child, which they believe to have been an intrauterine fracture of the neck, founding their belief on the radiograph. This lesion resembled the first two cases and suggested such a fracture as being possible, especially as postuterine fracture could be eliminated in both.

The next report is by Joachimstahl,[5] who believes that in two cases which he reports he had a type of coxa vara which has clinical relationship with those occurring in the earliest period of extrauterine life, but he calls attention to a less typical form of congenital coxa vara which has a relation to congenital defect of the femur. He reports a case in which a severe coxa vara occurred on the right side, with a defect of the upper part of the shaft, and an extreme coxa vara on the left. The author calls attention to a case which Drehmann reported, and reports one which is parallel, the two cases showing similar combinations. He calls attention to the fact that besides the defect in the femur and the bend at the upper end of the stump, there occurred a decided retardation of the ossification of the upper part.

Parallel with Joachimstahl's report we find the report of Reiner[6] on the relationship between congenital coxa vara and congenital femur defects. He believes that congenital coxa vara is a preceding stage in a deformation process leading to the defect of the femur. He says that there are three types of this condition, each of which represents a different stage in the same process. In the first type, or the first stage, we have congenital coxa vara. At the same time the shaft is shortened both in length and caliber. The other two stages are represented by greater defects in the femur, even by total absence, but he emphasizes the fact that each one of the three types is a fixed stage of one and the same deformation process.

The process is referred to as a "modellirendes trauma" beginning in the amnion. What influences the formation of the deformity is the peculiar course of development through which the femoral shaft passes in its earliest period of embryonic life. At about the tenth week the proximal end of the femur is subject to a transformation process in which the thigh, which is normally abducted in relation to the pelvis, instead of this is now adducted and turned inward, while at the same time the formation of the angle of the neck of the shaft takes place.

Recently Clark[7] reported a case of congenital coxa vara with associated deformities in a girl two years old, in which the Roentgen picture showed on the left side a typical coxa vara. The other deformities were a bend at the left knee joint of 45 degrees, with absence of the patella and the quadriceps. The foot was in a position of talipes equino-varus. On the right side there was genu recurvatum and talipes calcaneo-valgus. Besides this the radiograph showed the sacrum deflected to the deformed left side and that the upper side of the os innominatum was flattened.

Before concluding this review it is necessary to refer to the conditions described by Drehmann[8] with reference to joint inflammation in sucklings and their etiologic relation to later deformities. He says that in the earliest age we may have a typical joint inflammation, beginning with local signs, followed by healing and later by deformity. He points out the relation of this condition to an infection such as the gonococcus, but not necessarily this organism. He says that a slight trauma during delivery would predispose toward auto-infection. Among these cases he says there are some so-called congenital dislocations and rarely a coxa vara. He reports two of the latter, one of them typical. The point is that such deformity, according to the author, can not be distinguished from the so-called congenital ones.

DISCUSSION OF CASE.

This review, we believe, covers all the important works on congenital coxa vara up to date. The relation of my case to those reported is of some interest. With regard to Drehmann's deformities at the suckling age, I do not believe that mine comes under that category, for there was no history of ophthalmia and no local signs pointing to inflammation.

The rachitic deformities in a few of the cases have nothing to do with mine, as there were no signs of rickets. The question of associated deformities or defects which occurred in so many is an interesting one, because the only other deformity in my case was that of a knock-knee. According to Reiner's belief that coxa vara is one stage in a process leading to femur defects, this case would readily find its place in his classification were it not for his observation that the shaft is shortened both in length and caliber even in the first stage. My case does not answer to this description.

As to the theoretical origin of the deformity *in utero*, we believe that the mechanical conditions are sufficient to explain that. Reiner's theory that at the end of the tenth week the angle of the neck of the shaft is determined by intrauterine conditions seems reasonable as an explanation which is founded on the fact that the femur, instead of being abducted, is adducted. In this connection it seems worth while to place a fetus in the position which my case seemed to have had at birth.[9]

2. Zehnder: Centralblatt f. Chir., 1897, No. 9.
3. Kirmisson: Revue d'Orthopedie, 1897.
4. Mouchet et Aublon: Gazette hebd. de med. et de Chir., 1899.
5. Joachimstahl: Zeitschrift f. Orth. Chir., vol. xii, Nos. 1 and 2.
6. Reiner: Zeitschrift f. Orth. Chir. vol. xii, Nos. 1 and 2.
7. J. Jackson Clark: British Journal of Children's Diseases, June, 1904.
8. Drehmann: Zeitschrift f. Orth. Chir., vol. xiii, Nos. 2 and 3, vol. xiv, Nos. 3 and 4.
9. For suggestion on this point I am indebted to Dr. O. T. Maynard.

Taking an eight months' fetus, hardened in formalin, we placed the right leg in its normal position as it occurred at birth, that is, flexed and abducted and then forcibly adducted the left leg on the belly so as to adjoin the other one. Tying the thighs in this position, we took a Roentgen picture of the fetus (Fig. 2.) The pic-

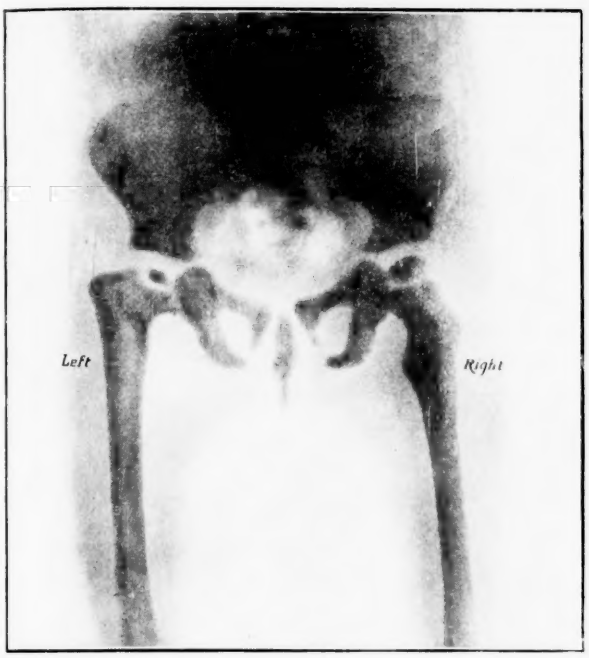


Figure 1.

ture shows a different relationship of the proximal ends of the femur to the acetabulum on the two sides. On the right, or normal side, the proximal end lies in a horizontal plane with the lower extremity of the pelvis. On the left, or adducted side, we find the end of the shaft well above the acetabulum in height. Besides this

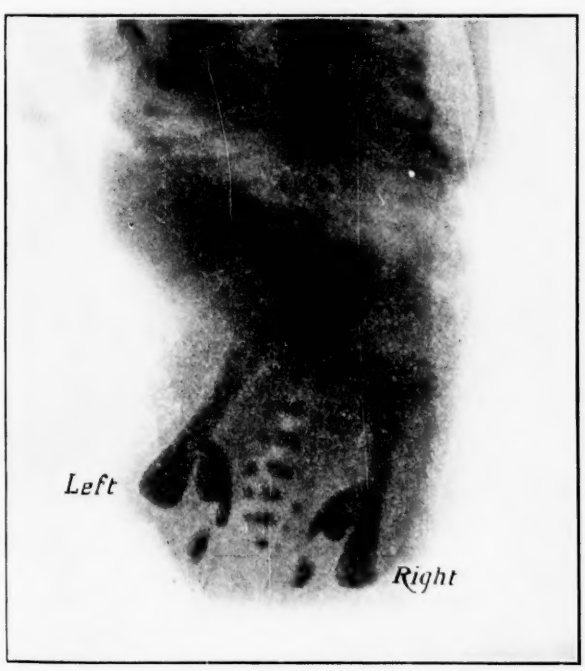


Figure 2.

the pelvis is tilted upward on the left and the sacrum deviated toward the same side. This deviation of the sacrum toward the deformed hip is an important point, for an exactly similar deviation is shown in Clark's radiograph. This means that we have probably demonstrated correctly the mechanical nature of the intrauterine strain.

If my case took the position of this fetus in the uterus we have a right to assume that the relationship must have become fixed and maintained for a long period, but without interfering with the freedom of motion of the joint. Then, after birth, the joints' ends must still further have maintained their relation to the pelvis, the left end remaining higher than the right, even after both legs have been brought downward into their extrauterine positions. This hypothesis is favored by the fact that ossification in the neck takes place from the shaft and travels upward toward the head which ossifies in the acetabulum from a separate center during the first year.

An interesting feature in my case is a diminution in size of the epiphysis of the head. On Clark's radiograph an epiphysis is not recognizable. The explanation of this is either the faulty static conditions of weight bearing, or retarded growth, due to a lesion of the neck. The shortening of the neck, together with thickening, suggests an intrauterine fracture, but we are not able to conceive a fracture in the true sense where the bone has not yet been formed.

CONCLUSIONS.

Congenital coxa vara is usually associated with defects or deformities of other parts, commonly with the defect of the femur and with deformities of the lower limbs. It may be intrauterine in its strictest sense, it may be the result of an intrauterine infection, or it may be combined with congenital rachitic deformities. At least some of the strictly intrauterine cases are associated with peculiar positions of the thighs in utero, that is, adduction of the thigh in question. This peculiar position of the joint might explain a fixed deformity in the later developing hip joint, if we may assume that the proximal end retains its relative position to the acetabulum after birth.

MORPHOLOGIC AND HISTOGENETIC CHARACTERISTICS OF ENDOTHELIAL TUMORS.

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A careful examination of the literature, not only of the past, but also the present, has convinced me that many of the tumors reported as carcinomata and sarcomata as well as tumors such as Krompecher's "carcinoma endotheliale" or Hansemann's "adenoma endotheliale," are in reality pure endothelial tumors. The latter author even speaks of a "carcinoma sarcomatodes endotheliale," thus combining three distinct groups of tumors in one. Krompecher[1] speaks of a "carcinoma endotheliale sarcomatodes," and calls an endothelioma a carcinoma with undifferentiated epithelium, naming it a "carcinoma endotheliale." It can only be an endothelioma which is capable of producing polymorphous structures leading to such complications of names.

The variability in the arrangement of endothelial cells and the ability of these cells to undergo metamorphosis, simulating the epithelial type at one place and the connective tissue type at another, has given rise to great confusion in the diagnosis of tumors. Morphologically, an endothelioma may resemble typical (adenoma)

1. Ziegler's Beiträge z. path. Anat., vol. xxxvii, No. 1.

or atypical (carcinoma) organoid structures or typical (fibroma) or atypical (sarcoma) histoid growths.

It is extremely confusing for the student who has learned to diagnose common atypical histoid growths, as sarcomata and atypical organoid tumors as carcinomata or endotheliomata, to read of the diagnosis of an atypical organoid tumor by Billroth as alveolar sarcoma; by Rindfleisch as sarcoma endotheliale; by Waldeyer and Kolaczek as angiosarcoma; by Fischer and Cramer as endothelial sarcoma, because atypical organoid tumors their morphology (atypical organoid tumors are cancers). But according to their histogenesis, they are not cancers at all. The greatest confusion has thus been brought about in the nomenclature of a class of tumors, which could neither from a histogenetic point of view nor from a purely morphologic one be classified either with the epithelial or with the connective tissue tumors. Endothelial tumors simulate morphologically the

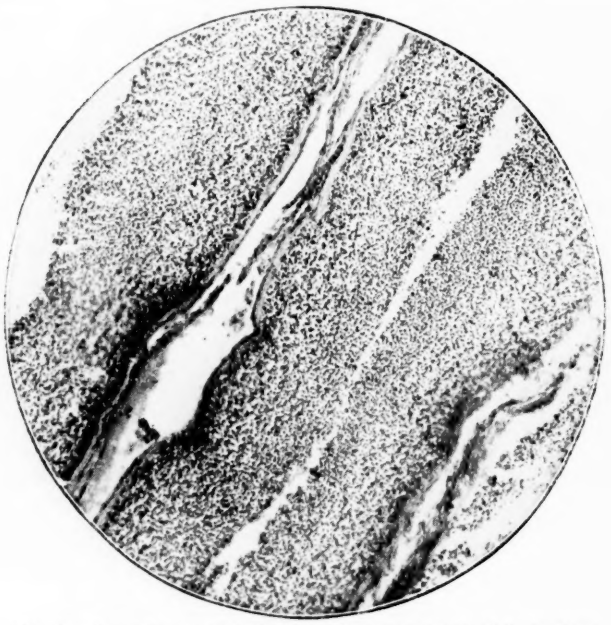

Fig. 1.—Lymphangioendothelioma intravasculare of knee joint.

Fig. 3.—Lymphangioendothelioma intravasculare of uterus. Fibrous tissue stroma with cellular columns and islands of cells containing lumina.

Fig. 2.—Lymphangioendothelioma intravasculare of uterus. Alveolar structure. Van Gieson stain.

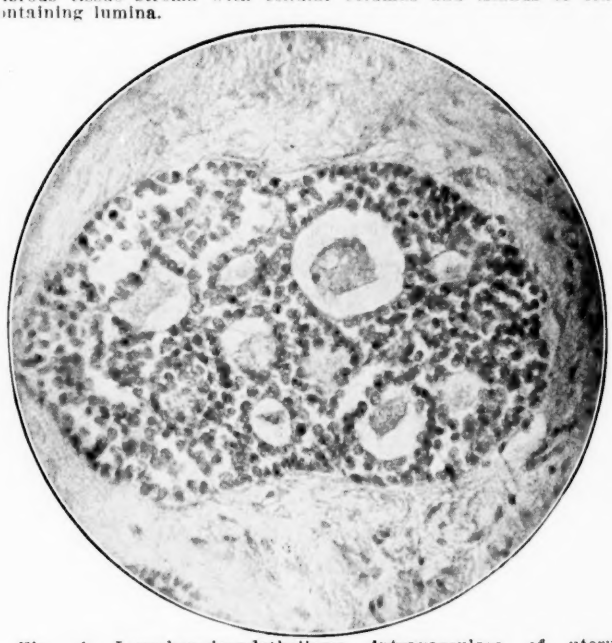

Fig. 4.—Lymphangioendothelioma intravasculare of uterus. Island of endothelial cells showing lumina filled with mucoid material. The cells around the lumina are somewhat cylindrical, imitating tubular glands.

exclude for him the connective tissue growths. Here the tumors are diagnosed by their histogenesis.

All these organoid sarcomata are really endotheliomata, and thus by their histogenesis are very closely related to the atypical connective tissue tumors, whereas by their morphology alone they resemble the organoid or epithelial tumors, and are called by Schulz endothelial cancer, by Neumann connective tissue cancer and brain cancer. They have been diagnosed according to atypical epithelial tumors, and histogenetically, the atypical connective tissue growths; but they only simulate them and can not be included with either type. Whenever this was done it either upset the whole system of practical diagnosis, or it violated the only scientific classification of tumors, that is, a histogenetic one.

Unfortunately, we can not always see the earliest steps in the formation and propagation of a tumor in

the living tissue, but must depend on interpreting these processes from histologic examinations. In the endothelial tumors we compare the parenchyma with normal endothelium just as we divide epithelial tumors histogenetically by comparison with normal squamous and cylindrical epithelium into two classes. Here also our diagnosis lacks exactness at times, because we are unable to decide whether we are dealing with squamous

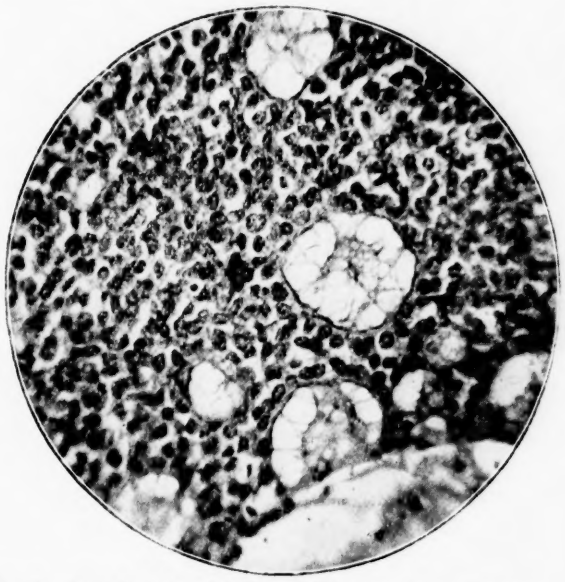

Fig. 5.—Lymphangioendothelioma intravasculare of uterus. Endothelial cell nest with lumina containing a delicate fibrillar network, which stains red with polychrome methylene blue and is coagulated by acetic acid.

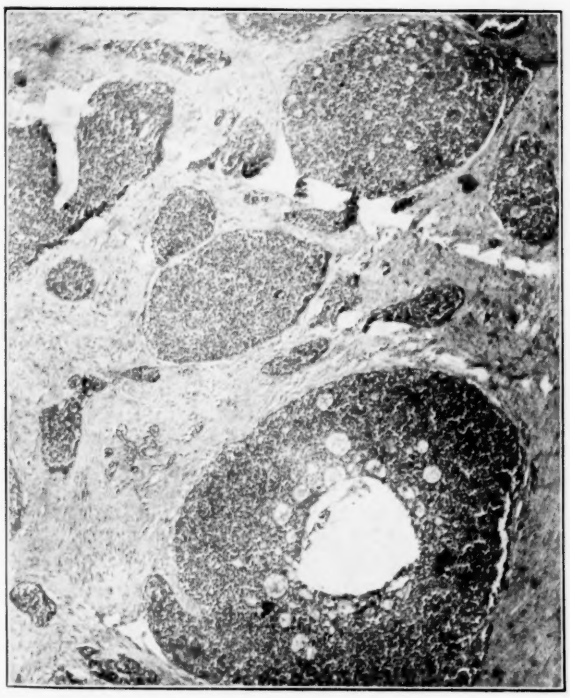

Fig. 6.—Lymphangioendothelioma intravasculare uteri. Structure similar to carcinoma. Large vessel with proliferated intima, containing many lumina. The vessel lumen is still visible.

or with cylindrical epithelium histogenetically. If we follow the general rule of attaching the end syllable "oma" to the name of the normal tissue which is the nearest related to the tumor tissue, morphologically as well as biologically, a growth which originates thus histogenetically from endothelium should be called endothelioma. Thus the endothelium of blood and lymph vessels may form histogenetically hemangioendothelioma and lymphangioendothelioma, respectively.

Embryologically, these tumors should belong to the connective tissue group, but endothelial cells resemble in many respects epithelial cells, and stand about midway between epithelial and connective tissue cells, which

Fig. 7.—Lymphangioendothelioma intravasculare of submaxillary gland.

accounts for the fact that endotheliomata have been called at one time epithelial growths (carcinomata), and at another time connective tissue growths (sarcomata). Histogenetically, they belong to the connective tissue tumors, because these flat endothelial cells may become

Fig. 8.—Hemangioendothelioma perivasculare of muscle sheath (arm).

cylindrical, form spindle cells and appear as fibroblastic elements.

CLINICAL SIGNIFICANCE OF ENDOTHELIOMA DIAGNOSIS.

A correct diagnosis of endothelioma is of the greatest practical value to both surgeon and patient, because endothelial tumors differ greatly clinically from other malignant tumors in that they are of slower growth

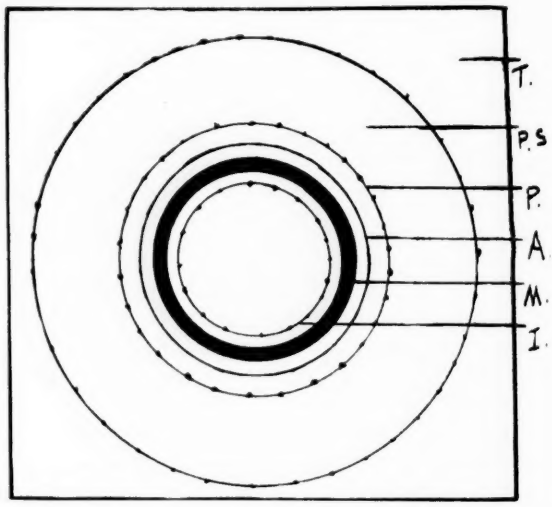

Fig. 9 (a).—Diagrammatic representation of perithelium and perivascular lymph space. T. Tissue. P. S. Perivascular lymph space. P. Perithelium. A. Adventitia of blood vessel. M. Media of blood vessel. I. Intima of blood vessel.

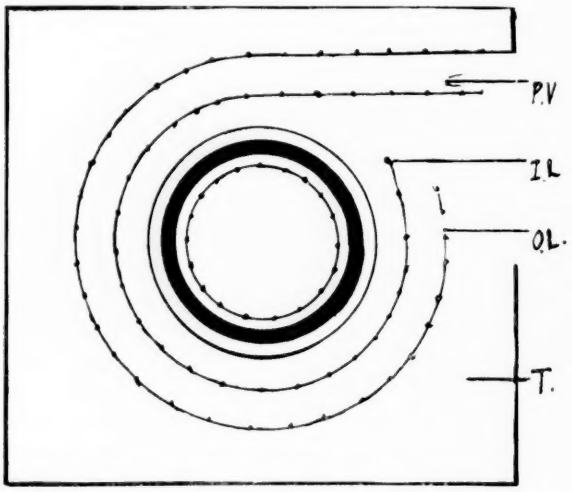

Fig. 9. (b).—Diagrammatic representation of inner layer of perivascular lymph vessel which may be mistaken for perithelium. P. V. Perivascular lymph vessel. I. L. Inner layer (endothelium) of perivascular lymph vessel which may be mistaken for perithelium. O. L. Outer layer (endothelium) of perivascular lymph vessel. T. Tissue.

Fig. 10.—Hemangioendothelioma perivasculare of mammary gland.

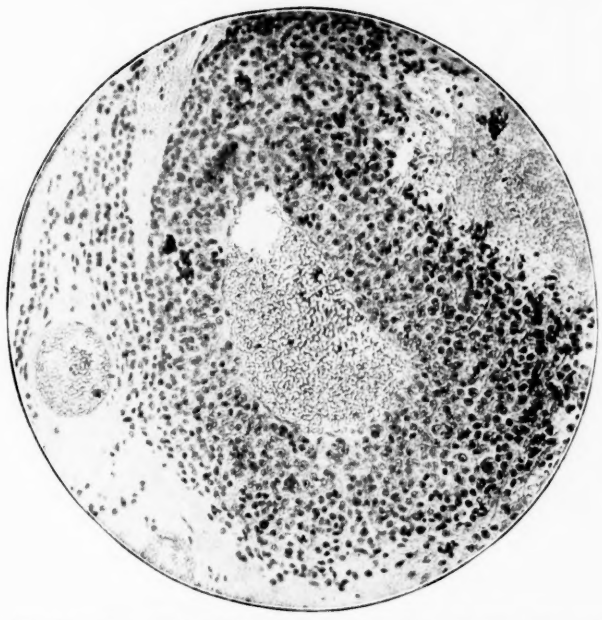

Fig. 11.—Hemangioendothelioma perivasculare of mammary gland.

Fig. 12.—Hemangioendothelioma perivasculare of cervical lymph node.

Fig. 13.—Clyindroma of parotid gland.

and do not produce metastases until late, when the tumor has reached considerable size. The neighboring lymph nodes are not early affected, as is common in carcinoma. The prognosis after thorough removal is much better and a cure much more probable than in carcinoma or sarcoma. Endotheliomata, however, are exceptionally prone to recur at the seat of operation, much more so and much earlier than carcinomata.

NECESSITY FOR A SYSTEM OF DIAGNOSIS.

In view of these clinical facts, a system of accurate diagnosis of endothelial tumors becomes of the greatest importance. Endothelial tumors are very commonly mistaken for carcinomata morphologically, because these tumors have an atypical organoid structure resembling epithelial neoplasms, whereas, histogenetically, they are of mesoblastic origin, and endothelial tumors are thus included under atypical connective tissue growths, although their cells are morphologically very different from connective tissue cells.

The struggle between the purely morphologic and the purely histogenetic classification in the different text-books, and the fact that these tumors differ very much in their clinical behavior from carcinomata and sarcomata, demonstrate the necessity of recognizing endothelial tumors as a class by themselves.

I can not at all agree with Hansemann and Ziegler, who propose to solve the problem by including endothelial tumors with epithelial neoplasms because they correspond in their structure and clinical behavior to the epithelial tumors of the ectoderm and entoderm. It is just this difference in clinical behavior, the slow growth, the late metastases and the better prognosis after thorough removal of endotheliomata, which distinguishes these growths from the carcinomata and makes a correct diagnosis so essential.

A practical system of diagnosis would seem to lie in entirely detaching endothelial tumors from the other tumor groups and in the establishment of a separate class of endothelial tumors, without disturbing the usual and useful system of histologic and histogenetic classification in this way:

1. Epithelial tumors (organoid); typical (benign), and atypical (malignant).
2. Endothelial tumors (organoid).
3. Connective tissue tumors (histoid); typical (benign) and atypical (malignant).
4. Teratoid tumors.

According to whether the endothelial proliferation originates from lymph vessels and lymph spaces or from blood vessels, and whether the inner endothelial lining of the vessels proliferates or the outer, the endothelial tumors may be further classified:

1. Lymphangioendothelioma intravasculare.
2. Hemangioendothelioma perivasculare.
3. Hemangioendothelioma intravasculare.

When marked hyaline degeneration is present in any of these morphologically distinct types, we may add to the above names "cylindromatosum." Instead of speaking of a perithelioma, we use the term perivascular. I will discuss the reasons for the various changes later.

For a really scientific foundation, such a system should have not only a morphologic basis, but a biologic and histogenic one as well. Morphologically, endothelial tumors appear like carcinomata; histogenetically, they should be sarcomata. To justify the consideration of endothelial tumors as a separate class and to determine the various types of endothelial tumors which, morphologically, may simulate carcinomas, adenomas and sarcomas, it will be necessary to prove:

1. That endothelial cells can be considered as a special type of cells, biologically different from epithelial and connective tissue cells.
2. That certain characteristic morphologic distinctions exist between endothelial tumors and those they resemble morphologically (carcinoma) and histogenetically (sarcoma).
3. That such morphologically characteristic endothelial tumors can be traced histogenetically to pre-existing endothelium.

ENDOTHELIAL CELLS BIOLOGICALLY SPECIAL CELLS.

Since His invented the word endothelium for the flat cells which constitute the inner lining of the blood and lymph vessels and of serous cavities, and differentiated these cells from epithelial cells, pathologists have spoken of tumors originating from these cells as endothelioma until Stoehr, Ranvier and other histologists began to classify them as true epithelial cells, because morphologically they resembled squamous epithelial cells, thus neglecting their apparent but embryologically contested mesoblastic origin entirely. The result was that some pathologists considered these tumors as epithelial neoplasms (carcinomata). The more observing noticed that these tumors differed morphologically from squamous cell carcinomata and spoke of endothelial cancers. Embryologically, it is generally conceded that endothelial cells of blood and lymph vessels are developed from the mesoderm, although some embryologists contend that they are formed by the entoderm. The mesoderm also is said by one school of embryologists to originate from the ectoderm and by another school from the entoderm. It is plain, therefore, that the pathologist can not classify endothelial tumors by embryologic data as a basis, either with the epithelial or the connective tissue tumors.

Borst[2] defines the endothelial cell as a morphologically and functionally well-characterized cell form, a modified connective tissue cell, specially differentiated at the shores of plasmatic streams, and includes under endothelial cells all cells which form one layer of flat cells, lining serous cavities, meningeal lymph spaces, inside and outside layers of blood and lymph vessels and the lymph spaces of connective tissue.

From a biologic point of view, endothelial cells can be readily differentiated from other connective tissue cells by their ability to secrete mucin, hyaline and amyloid material, thus imitating the secretory functions of epithelial cells (Heidenhain[3]).

On the other hand, endothelial cells are capable of producing connective tissues in the inflammations of serous cavities, blood and lymph vessels, producing granulation tissue, epithelioid cells, giant cells, as well as intercellular cement substance. They may again take on their embryologic columnar cell form and produce adenoma-like tubules lined with one layer of cylindrical cells like epithelium.

These are the reasons for the polymorphous nature of endothelial tumors which may simulate the structure of a carcinoma, an adenoma or various types of sarcomata and which have given rise to the confused diagnostic nomenclature in the literature of tumors. Borst has collected a number of such diagnoses from the literature, which, from the descriptions of the authors, are plainly endothelial tumors, as follows:

Robin, epithelioma of serous membranes; Schulz, endothelial cancer; Rindfleisch, sarcoma endotheliale; Fischer and Cramer, endothelial sarcoma; Neumann,

2. Lehre von den Geschwülsten, 1902, pp. 276 and 292.
3. Pflüger's Arch. vol. xlix, p. 209.

connective tissue cancer; Ewetzky, sarcoma plexiforme; Billroth, alveolar sarcoma; Waldeyer, Kolaczek and Hippel, angiosarcoma; Arndt and Maier, carcinoma cerebri; Schottelius, lymphangitis carcinomatosa; Billroth, cylindroma; Burkhardt, perithelioma; Böhme, sarcocarcinoma; Sattler, carcinoma sarcomatosum; Hansemann, carcinoma sarcomatodes endotheliale; Nauwerck, hyperplastic capillary angioma; Hansemann, adenoma endotheliale; Hansemann, carcinoma endotheliale.

GENERAL MORPHOLOGIC CHARACTERISTICS OF ENDOTHELIAL TUMORS.

Endotheliomas have certain general characteristics which distinguish them from other atypical organoid tumors (carcinomas):

1. The tumor cells in endothelioma are intimately connected with the stroma, and can not be brushed out of the stroma, as is the case in carcinoma in which the epithelial cells may also retract from the stroma and show spaces.

2. Endothelial cells produce intercellular cement substance and are closely packed together, whereas the epithelial cells in carcinoma have no intercellular substance and form no compact layers.

Fig. 14.—Recurrent hemangioendothelioma perivasculare of arm, 4 months' growth.

3. In endothelioma delicate fibrillar processes extend from the walls of the alveoli into the proliferated endothelial cell masses. These are absent in carcinoma.

4. In endothelioma the cell masses consist of a dense mosaic of many layers of cells with small, sharply outlined nuclei, surrounded with a broad envelope of clear, glassy perinuclear protoplasm. Carcinoma cells have large vesicular nuclei, with a moderate amount of perinuclear protoplasm, more or less granular.

5. In endothelial tumors the cells are arranged in the form of cellular cords and cylinders (round masses in carcinoma), and may separate out hyaline material (cylindroma) or form lumina-like areas (sieve-like) in the cellular cords, due to secretory processes of endothelial cells.

6. To distinguish the endothelial tumors from sarcomata it is to be remembered that the former have an organoid, the latter a histoid, structure. According to this definition every large-cell sarcoma with a well-developed stroma, which was formerly called alveolar sarcoma, would be called an endothelioma.

SPECIAL MORPHOLOGIC CHARACTERISTICS OF THE VARIOUS TYPES OF ENDOTHELIAL TUMORS.

From a large amount of material collected during the past eight years I have chosen six cases which will illustrate the various points made in this paper and the reasons for the adoption of a nomenclature, which is justified in view of its practical nature as well as its well-formed morphologic and histogenetic basis.

Lymphangioendothelioma Intravasculare.—Such tumors occur most frequently in the salivary glands, skin, meninges, testicles, ovaries, bones, serous membranes, stomach and mammary glands. This tumor has an organoid structure, consisting of a fibrillar matrix and connective tissue stroma, arranged in rows (Fig. 1) or forming an alveolar structure (Fig. 2), and more or less solid cords or columns of endothelial cells. These solid cellular columns may be seen, at the circumference of the tumor, to be continuous with branching net-like narrow cellular strips which invade the neighboring connective tissue and produce the appearance of newly forming lymph vessels, and are in reality the youngest forms of the tumor cells, infiltrating and invading the surrounding tissue. The larger, solid and older cellular columns frequently have a sieve-like appearance, due to the formation of so-called lumina (Fig. 3). These lumina, although resembling the lumen of capillary lymph vessels within the endothelial cell mass, are produced by a secretory process of endothelial cells. This secretion may collect in larger or smaller amount. It gives the same reactions as mucin (Fig. 4). In my specimens the so-called lumina contained a fine fibrillar network which stains blue with alum hematoxylin and pink with polychrome methylene blue (Fig. 5). Acetic acid coagulated it. The endothelial cells around these so-called lumina are pressed on and take on cylindrical shapes, so that pictures like tubular glands may be produced (Fig. 4).

The endothelial lining of a lymph vessel may proliferate so that its intima consists of many densely packed layers of polygonal cells with small distinct nuclei (Fig. 1), abundant glassy perinuclear protoplasm and distinct intercellular cement substance producing a mosaic picture. The lumen of the lymph vessel may be obliterated (Fig. 2). If a lumen still remains in such a vessel and it happens to be surrounded with a good deal of fibrous tissue stroma the structure may resemble a glandular carcinoma very much (Fig 6). The lumen of the lymph vessels then resembles the lumen of a gland, and the proliferated endothelial cells of the intima may then be taken for the atypical proliferation of epithelial cells which line the gland in many layers. Here the lumina, the small nuclei, the rich and glassy perinuclear protoplasm of the cellular cords help to differentiate this tumor as an endothelioma, particularly if other solid cellular cords also have lumina and if the younger circumferential areas of the growth show the invading, branching, net-like, narrow strips of proliferating endothelial cells in connection with the older, more solid, cellular columns.

The stroma frequently forms an alveolar arrangement so that such a tumor has been called alveolar sarcoma (Fig. 2). Ribbert goes so far as to include every large round-cell sarcoma with well-developed alveolar stroma under endothelioma. Borst warns against calling every round cell sarcoma which happens to have an insignifi-

cant fibrillar reticular framework, an endothelioma. He demands the proof of the endothelial origin of the tumor and then names it endothelioma alveolare. On the other hand, the fibrous tissue stroma may be so prominent in some of the endothelial tumors as to simulate scirrhous carcinoma or even fibroma. The so-called endothelial cancers of serous membranes, as well as the diffuse colloid carcinoma or carcinoma gelatinosum of the peritoneum, are also to be included under lymphangioendothelioma.

In addition to the points here made for a diagnosis of endothelioma, it is necessary that the tumor possess the general differential characteristics, already mentioned, which distinguish it from certain tumors of epithelial or connective tissue type. The special morphologic characteristics of a lymphangioendothelioma are well illustrated by the three following cases:

LYMPHANGIOENDOTHELIOMA INTRAVASCULARE OF UTERUS.

The first case is one of lymphangioendothelioma of the uterus which occurred in the private practice of Dr. Emil Ries, to whom I am indebted for the material.

This case is of general interest because very few endothelial tumors of the uterus have been reported, and of those found in the literature none presents an endothelial neoplasm so extensive as that shown in this case. It presents such characteristic microscopic features that a diagnosis was made from a cervix curettement before hysterectomy.

According to the literature, a curettement diagnosis of endothelioma of the cervix has been made only once by Gebhard, and in his case there were such extensive tumor masses in the parametrium that no operation was attempted.

Although the microscopic and diagnostic features described in the few cases found in the literature closely correspond with those I found in this case, not one of them shows the extensive, diffuse endothelial infiltration and proliferation present in this uterus, converting the whole organ, body and cervix into a solid neoplasm of the shape of a nearly normal uterus, the only portion escaping being a small area of the fundus.

The patient, aged 68, had four children and presented the clinical symptoms of uterine carcinoma.

Treatment.—A vaginal hysterectomy was done and, to our great surprise, a fairly normal-sized uterus was found of very hard and fibroid-like consistency, 3 inches (75 mm.) in length and 1½ inches (37 mm.) in breadth.

Result of Operation.—The patient died 11½ months after the hysterectomy with multiple metastatic tumors of both pleuræ, lungs, bronchial glands, diaphragm, liver, both kidneys, right adrenal, pelvic lymph nodes, rectum and left sacral plexus, all of which showed the same cell cords, with lumina and general structure as described in the uterine neoplasm.

Description of Growth.—The uterus was sectioned longitudinally. The uterine cavity was obliterated, except a small narrow slit extending ¾ of an inch (25 mm.) down from the fundus and just admitting a probe. This probe could also be introduced into the cervical canal for ¾ of an inch (25 mm.). The atresia extended from the middle of the cervical canal to the middle of the corpus. The anterior and posterior lips of the portio were enlarged and hard. The whole cervix and all the body of the uterus, except the fundus, consisted of a hard, tumor-like mass, retaining the shape and size of a normal uterus, but of a white, rather fibrous or scirrhous appearance. The fundus alone retained the usual color of uterine musculature for an area of 1¼ by ¾ inches (32 mm. by 25 mm.).

The cut surface of the growth had a smooth, white appearance, with fine irregular and round mosaic-like fields. The whole uterus, except the fundus, appeared to be one large tumor nodule. The mucosa was smooth, atrophic and glistening.

No metastatic tumors were found by Dr. Ries at the time of operation.

Microscopic Examination.—Sections were made from all parts of the tumor and stained by the common and by special staining methods.

The whole uterus, except its fundus, showed a fibrillar ground substance, with solid cellular cords, cut in longitudinal and transverse sections (Fig. 2). These cellular cords reminded one, in their distribution and character, of lymph spaces. Lymph vessels and lymph spaces traversing this fibrillar connective tissue were lined with proliferating epithelioid cell masses. These cords of cells appeared like cellular cylinders of large diameter (lymph vessel endothelioma) or as delicate cell strips of two layers of flat cells branching here and there (lymph space endothelioma). Both of these forms were combined in some of the fields. The larger endothelial cell masses had numerous so-called lumina containing mucoid material (Figs. 3, 4 and 6).

Other portions of the tumor looked like scirrhous carcinoma, and the dictum of Hansemann, that most scirrhous carcinomata of the uterus, stomach and esophagus are endotheliomata, will find by these specimens a substantial support. There were large areas with a stroma of dense fibrous tissue and alveolar arrangement of endothelial cells, as seen in glandular carcinomas (Fig. 6). This organoid, carcinoma-like type is found more often in endothelioma of lymph vessels than of lymph spaces. The so-called lumina contained a delicate fibrillar network (Fig. 5) or a homogeneous material (Fig. 4) which stained pale-blue with hematoxylin. With polychrome methylene blue the tissue stained blue, whereas the delicate network in the lumina stained red, that is, like mucin. Acetic acid also coagulated it.

Some of the alveolar cell nests could be seen to be continuous with delicate cellular cords and a network of lymph spaces with proliferating cells. With the Van Gieson stain the stroma of the tumor was seen to consist entirely of a fibrillar connective tissue reticulum, all involuntary muscle fibers having practically disappeared (Fig. 2). The mucosa, lining the cavity of the uterine body, showed some interstitial hyperplasia, cystic and atrophic glands and a few small endothelioma metastases with characteristic lumina between the cystic glands.

LYMPHANGIOENDOTHELIOMA INTRAVASCULARE OF THE KNEE JOINT.

This case occurred in the practice of Dr. A. H. Ferguson.

Patient.—A night watchman, aged 36, noticed, a few months after a fall on his knee, a small growth at the outer side of the patella. When removed by Dr. Ferguson it appeared as a circumscribed, encapsulated, oval and flat fibrous growth attached to the synovial membrane.

Microscopic Examination.—Microscopically the tumor consisted of a fibrillar connective tissue stroma which formed a network of long, wavy strands when cut longitudinally and circles when cut transversely, inclosing densely packed cellular cords of round cells with small nuclei and abundant, transparent, perinuclear protoplasm, with distinct intercellular cement substance (Fig. 1). Some of these cellular columns had a large or narrow lumen which contained a small amount of finely granular or mucin-like material; in others the lumen was obliterated and a solid cord of proliferated endothelial cells of the intima was formed, surrounded by strands of fibrous connective tissue. Only a few lumina were seen in the solid endothelial cell-cylinders.

Subsequent History.—The diagnosis was lymphangioendothelioma, but was doubted because for 2½ years the patient had no recurrence of the growth. A nodular growth then appeared in the popliteal space, and after this had attained the size of a hen's egg Dr. Ferguson operated again, but was unable to remove the entire growth because the internal popliteal nerve and the popliteal artery and vein appeared to be included in the lobulated tumor mass, which was found partially circumscribed, partially infiltrating the tissues in the popliteal space. Microscopic examination revealed identically the same structure as that of the extrapatellar tumor removed 2½ years previously.

Amputation of the limb was not consented to by the patient, and he again attended to his regular duties as night watchman for eight months, when the growth in the popliteal space gradually enlarged and, for the first time, three and one-half years after the appearance of the primary tumor, the inguinal glands showed metastatic enlargements, which made the prognosis bad, although the patient now insisted on amputation and was operated on. He died about eight months later with multiple metastases in many organs.

Remarks.—I am firmly convinced that if the man had consented to an amputation when Dr. Ferguson and myself advised it he would have lived. This case illustrates well the slow growth of endothelial tumors and the late metastases as compared with carcinomata and sarcomata, and that the early recognition of an endothelioma by microscopic examination should be an indication for thorough operative removal, with a very favorable prognosis.

LYMPHANGIOENDOTHELIOMA INTRAVASCULARE OF SUBMAXILLARY GLAND.

To contrast the two lymph-vessel endotheliomata just described microscopically with a so-called lymph-space endothelioma (although the two are frequently combined in one tumor, in which case the lymph-space growth is probably nothing more than a secondary invasion by atypical endothelial cells), I will describe briefly a third case of a pure lymph-space endothelioma of the submaxillary gland occurring in a woman, 69 years old, who was recently operated on by Dr. Allport (Fig. 7).

A rich stroma of fibrous tissue contained in narrow slits rows of small endothelial cells of somewhat columnar shape in one or more layers. Those lined with but one layer of cells looked like tubular glands, as long as a lymph-space lumen was still visible. When the proliferation of these morphologically characteristic endothelial cells became more pronounced, distending the lymph spaces and producing a small island of densely packed cells, characteristic lumina appeared.

The same structures also were found in the adventitia of the larger blood vessels (perivascular lymph spaces) of this growth.

HEMANGIOENDOTHELIOMA PERIVASCULARE (PERITHELIOMA).

The common tendency nowadays is to call the former angiosarcoma a perithelioma, in the attempt to indicate more accurately the histogenesis of the tumor. To what confusion this has led is best illustrated by a study of so-called peritheliomas as reported in recent literature in the light of our present anatomic or histologic knowledge of perithelium.

Such perithelial tumors have been reported from organs and tissues whose blood vessels are known to have no perithelial membranes at all, that is, from non-perithelial organs. Even in so-called perithelial organs, the capillaries never are covered with a perithelial membrane, although some authors speak of perithelial tumors as arising from blood capillaries. Von Ebner-Koellicker[5] state that the outer surface of endothelial cells of blood capillaries is in direct contact with the ground substance of the surrounding tissue. It is just as wrong to speak of a perithelioma as arising from a lymph vessel because perithelial membranes cover the outer surface of the adventitia of blood vessels only in a one cell layered mosaic of flat endothelium-like cells. They have only been found with blood vessels of certain organs called perithelial organs.

A perithelioma can not, therefore, be spoken of as arising from lymph vessels nor from blood capillaries. This, then, confines the term, perithelioma, to certain tumors of the blood vessels of perithelial organs only. Yet so-called perithelial tumors or angiosarcomata do occur in non-perithelial organs which are morphologically similar, but only similar, to the true peritheliomata. From a histogenetic point of view it is desirable that the term perithelioma be reserved for a class of tumors arising from perithelium only. The term perithelium was applied by Eberth[6] to an endothelium-like membrane of flat polygonal cells which lines the outer surface of the adventitia of the blood vessels of the brain and cord. The perithelial membrane must be differentiated from the perivascular lymph spaces of His,[7] which he found surrounding the adventitia of arteries, veins and capillaries of the central nervous system (which has no lymph vessels). The perithelium is the outer lining of the adventitia of blood vessels, outside of which is the perivascular lymph space (Fig. 9).

Driessen[8] described a bone tumor as growing from the perithelium of blood capillaries and then named it endothelioma. This explains better than anything else the confusion which exists in the literature on perithelioma. Driessen first claims that the tumor started from the perithelium, although no perithelium has been found in the vessels of bone. He claims it started from perithelium, but names the tumor an endothelioma, because he appears to consider perithelial cells as the outer endothelial layer of a perivascular lymph space. Borrmann,[9] in a very careful review on vascular tumors, remarks that Driessen's tumor was not a perithelioma because bone vessels have no perithelium, and it could not have been a perithelioma growing from capillaries, because capillaries never have perithelium. In regard to the latter point, it might be well to remember that the more delicate structure of capillaries in various vascular regions is not yet sufficiently understood, and that for many blood capillaries it has been proven that they are surrounded with a cellular sheath, which Auerbach and Eberth speak of as vascular perithelium and others as capillary adventitia. Sheaths of peculiar cells are found around the capillaries of the carotid gland,[5] the coccygeal gland,[5] and the testicle.[5] The coccygeal gland, discovered by Luschka[10] and studied minutely by Krause,[11] Arnold[12] and Sertoli,[13] has capillaries and small veins which have an adventitia of polygonal small cells.

Volkmann wants to call these cells capillary adventitia cells and not real perithelial cells. Borst calls them perivascular cells or adventitia cells of capillaries, and says that their pathologic proliferation causes cylindrical cell mantles around capillaries like those of perithelial cells. Borrman says that capillaries never have a perithelial membrane. Perithelial cells have also been described in the adrenals, pineal gland, mammary glands and salivary glands, and many authors consider them closely related to endothelial cells. It is necessary to emphasize the fact that the perivascular lymph vessels, which are found in many organs, also have nothing to do with perithelial membranes, so that the inner layer of the perivascular lymph vessel must not be mistaken for perithelium (Fig. 9).

In order, then, to arrive at a histogenetic classification of these tumors we would have to be able to distin-

5. Handbuch der Gewebelehre, 1902, vol. iii, p. 668.

6. Virchow's Arch., vol. xlix.
7. Zeitsch. f. wiss. Zool., vol. xv, p. 127.
8. Ziegler's Beiträge, vol. xiv, p. 474.
9. Virchow's Arch., vol. clvii, p. 315.
10. Virchow's Archiv., vol. xviii.
11. Allgem. Anat., 1876, p. 323.
12. Virchow's Arch., vol xxxii and xxxiv.
13. Virch. Arch., vol. xliii.

guish whether the proliferation of cells had their origin in the true perithelium of blood vessels which lines the outer surface of the adventitia in perithelial organs (perithelioma); in the inner or both endothelial layers of a perivascular lymph space; or, in the adventitia cells or perivascular cells of blood capillaries.

Pick and Rosthorn call all these endothelium-like layers perithelium and their proliferation a perithelioma. Borst also wants to use the name perithelioma for all these tumors, with the understanding that it is a kind of offspring of endothelioma. In case one is able to prove that the growth originated from the endothelium of the perivascular lymph spaces, it should be called endothelioma perivasculare (Borrmann's periendothelioma).

Borrmann thinks he can distinguish morphologically between the two types as follows: Perithelioma, when the vessels are surrounded by many layers of cells, which are arranged radially and vertically to the wall of the vessel; periendothelioma when the vessels are surrounded by many layers of cells which are arranged concentrically around the wall of the vessel.

From a careful study of my perithelial or perivascular tumors, I am unable to verify Borrmann's morphologic distinctions, and in view of the existing uncertainties and controversy as to the nature of perithelium, endothelium of the perivascular lymph spaces and capillary adventitia cells, I prefer to use the name hemangioendothelioma perivasculare, on account of the great histogenetic and morphologic similarity of perithelium, endothelium of perivascular lymph spaces and capillary adventitia. The three following cases illustrate such tumors:

HEMANGIOENDOTHELIOMA PERIVASCULARE OF LEFT ARM.

The patient, a married Polish laborer, aged 38, came to Provident Hospital under the care of Dr. J. C. Hepburn, to whose kindness I owe the history of the case.

Family History.—The patient's father is living, aged 80; his mother is dead, cause unknown; two brothers are living and well; one sister is living, one died at the age of 8 years. The patient has never been ill, except that when 7 years old he had whooping cough.

Present Illness.—The patient was first seen Dec. 1, 1903. He had excruciating pain in the left deltoid region for six weeks. He had been unable to sleep and was losing in weight. He had a small growth for 15 years over deltoid without discomfort until six weeks before applying for treatment, when the tumor began to grow rapidly and became daily more painful. He had lifted and carried heavy pieces of lumber.

Examination.—Physical examination revealed an oval tumor six inches long in the left deltoid region just below the acromion process; the surrounding tissue was inflamed. The tumor was just below the skin, which was freely movable over the growth, the latter being attached below. The tumor was hard and fibrous.

Operation.—Dec. 4, 1903. An encapsulated tumor was found attached to the intermuscular septum between the deltoid and triceps muscles; the periosteum was not involved. The wound healed by first intention, and the patient left the hospital in seven days and returned to work.

Description of Tumor.—The tumor measured 13x12x8 cm. It was oval, with globular bosses, and was distinctly encapsulated except at two places. One portion of the growth was of stony hardness, 6x6½ cm. There were several cysts, one 2½ cm. in diameter containing a clear yellow fluid. The cut surface was shining white, lustrous in the center and finely granular and friable at periphery.

Microscopic Examination.—The tumor consisted of a tangled mass of blood vessels, whose walls were surrounded by a mantle of densely packed cells, round and spindle-shaped, and arranged in circular layers around and close up to the distinctly visible intima, the lumen of which was filled with red blood corpuscles. These cellular tubes were either confluent or separated by myxomatous tissue (Fig. 8). The patient was advised to have a complete excision of the upper extremity at once, but he did not consent and continued at work.

Subsequent History.—The man returned, four months later, emaciated, unable to sleep, no appetite, temperature 102, pulse 120. He had had no pain for two months after the operation and was able to use his arm well. Then a bean-sized, painful growth appeared at the site of the primary tumor and grew rapidly during the last two months to the tremendous size as shown in Figure 14. The tumor involved the whole external and posterior aspect of the upper three-fourths of the arm. It showed large nodular masses, with necrotic areas in the center of the two lower lobes. The axillary glands were enlarged. The growth was diffuse, the whole mass fixed and the skin adherent.

Second Operation.—April 29, 1904, the whole arm, outer two-thirds of the clavicle and the scapula were removed and the axillary glands carefully dissected out. Most of the wound closed by first intention and by the thirteenth day after the operation the man was walking about.

Result.—This extensive growth microscopically was the same as the first small tumor. On June 2, 1904, Dr. Hepburn showed the patient at the south side branch of the Chicago Medical Society. As far as known there has been no return of the growth.

HEMANGIOENDOTHELIOMA PERIVASCULARE OF MAMMARY GLAND.

If we now compare with this tumor, which grew from a non-perithelial tissue (muscle sheath of the arm) a hemangioendothelioma perivasculare of the mammary gland, which is a perithelial organ, we are at once struck by the histologic similarity of the blood vessels, cell mantles and myxomatous tissues between the cellular tubes (Fig. 10), except that the cell mantles consist here principally of distinct round cells, whereas in the former case many spindle-shaped cells are intermingled with round cells. In both tumors the cells (Fig. 11) are arranged in a circular manner around the distinct endothelial ring forming the intima. According to Borrmann's differentiation, a true perithelioma should have a mantle of cells which are radially arranged. When the cell mantle consists of cells arranged in circular layers (parallel to vessel wall instead of vertically) he wants to call it a periendothelioma. If both these tumors are false perithelioma ta, it will be interesting to add here another perithelioma, which goes to show that this morphologic distinction can not always be relied on.

This case occurred in the practice of Dr. Weller Van Hook, to whom I am indebted for the material.

History.—A woman, aged 35, had a slowly growing tumor of a lymph node of the neck for three years, which a former operator removed as a tuberculous hyperplastic lymph node. A new growth rapidly appeared in the same locality, which he again removed as a tuberculous gland. A third growth appeared in the same locality, which was removed by Dr. Van Hook and diagnosed by him as a neoplasm, probably malignant, although it had a capsule.

Microscopic Examination.—A thin, fibrous tissue capsule was seen. No lymphoid tissue could be found anywhere. The whole tumor consisted of a dense network of capillaries, with distinct endothelial walls, surrounded by densely packed mantles of proliferating, round perithelial cells, with distinct nuclei and abundant transparent perinuclear protoplasm. The majority of these cells were arranged concentrically and parallel to the vessel wall, the remainder vertically (Fig. 12).

HEMANGIOENDOTHELIOMA INTRAVASCULARE.

These originate only from blood capillaries, and have been called by Ziegler, hemangioma hypertrophicum; by Nauwerck, hyperplastic capillary angioma; by Borrmann, capillary endothelioma. They consist of a stroma of fibrous tissue with gland-like tubes filled with blood

and lined with one layer of endothelial cells which may be cubical or cylindrical in shape.

Another type of these tumors consists of a stroma of spindle-shaped cells. Irregular or round areas of red blood corpuscles are seen to be enclosed by mantles of endothelial cells which represent the proliferated intima of blood vessels, forming several layers of epithelioid cells. The lumina of these cellular tubes contain erythrocytes or may be entirely obliterated in some portions of the tumor, thus forming solid cords of cells.

OTHER ENDOTHELIAL TUMORS.

All the endothelial tumors are markedly subject to mucoid hyaline and amyloid degeneration, due to cellular metabolic disturbance, which leads to peculiar deposits of these products in the tissues. Hyaline metamorphosis of the vessel walls may lead to obliteration of the vessels, or the hyaline substance may be a degeneration product of endothelial cell masses. Such endothelial tumors are called cylindromata. (Fig. 13.)

Psammoma and cholesteatoma also are generally classified now with the endothelial tumors but can not be further discussed here.

THE USE OF SHEET PARAFFIN IN LESIONS OF THE NOSE AND EYE.

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Intranasal operations are for the most part simple procedures and eminently satisfactory both to the patient and to the surgeon. Sometimes following cautery work, however, removal of septal deformities, and even in some cases after turbinectomy, the postoperative swelling is a very troublesome and even serious complication, giving rise to adhesions that may leave the patient in a worse condition as regards nasal respiration than before the operation. As is well known, the reaction following operation varies greatly in different patients—the mucous membrane of some being particularly sensitive to any irritant and intolerant of operative work or even of postoperative treatment. In such individuals the liability of adhesions forming even at a period comparatively remote after operation is a serious possibility.

Some cases are due to carelessness on the part of the patient or to insufficient after-treatment; this possibility, of course, is largely increased in transient patients or those from out of town whose finances or business affairs make more than a very short stay impossible.

It has been our experience that in these cases in which the after treatment has to be left to the patient or to the family physician adhesions are almost sure to follow.

The worst cases are those in which septal outgrowths occur in conjunction with hypertrophied turbinates, and especially when both are operated on with only a short interval between. Several experiences of this kind have made us extremely careful in this particular, and we feel much less anxiety on this account since using the paraffin splint.

We refer to the sheet paraffin and wax used by dentists. The paraffin sheets are five and five-eighths inches long, three inches wide and one-sixteenth inch thick, easily cut and bent in any desired shape and soft enough to conform to the shape of the space in which they are placed.

The accompanying illustrations will serve to show the shape we generally cut them and how they look in position (Figs. 1 and 2). The posterior end is rounded and the edges are smoothed to facilitate its introduction and the anterior end is so shaped by cutting off the lower portion that its end hooks up under the front of the nose, being at the same time invisible at the anterior nares.

The various other devices in use for this purpose leave much to be desired. A long gauze tampon, such as is packed into the nose after turbinectomy, will not be tolerated longer than from twenty-four to forty-eight hours. It is very painful, retains the secretion and is an inviting field for infection. It is after the danger of hemorrhage has passed and the tampon has been removed that the indication for the paraffin splint arises. The splint could hardly exert any influence on the control of hemorrhage except in an extremely narrow nose or by acting as a foreign body, thus favoring coagulation. We have never used it, however, for this purpose.

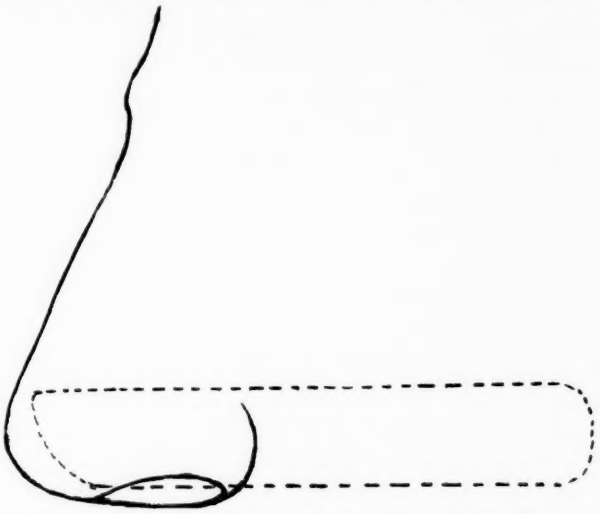

Fig. 1.—Showing splint in position in nose.

The Bernay splints, though less disagreeable, are open to the same objections as the gauze tampon. The hard rubber and silver perforated splints are disagreeable and painful; they also do not extend far enough back to do much good in preventing adhesions. The expedient of keeping the postoperative swelling reduced by instillations of adrenalin is in some cases satisfactory, but there are certain disadvantages. In the first place,

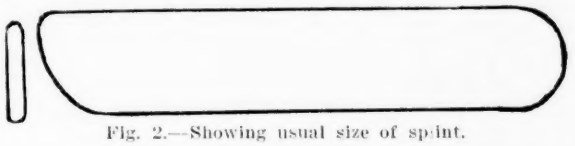

Fig. 2.—Showing usual size of splint.

the patient is apt to neglect his visits to the office, and often firm adhesion results, though the patient be entirely ignorant of anything wrong.

Neither is it a wise plan to put in the hands of a patient for indiscriminate use a drug of such powerful properties. We have no doubt that it can seriously hinder the regeneration of tissue, and the fact that it has produced local necrosis after use must not be forgotten.

Only common sense surgical principles are indicated in the employment of paraffin. The shape of the splint varies with the area to be separated, being cut to suit each particular case. We handle the paraffin with clean hands and shape it with clean instruments, and as an additional precaution, just before introduction we scrape

the whole surface thoroughly, thus rendering it absolutely sterile.

We have never tried keeping it in solutions of the antiseptics in common use, as in the strength required they would prove an irritant to the mucous membrane, and in any event our method seems to be the most direct and practical.

METHODS OF APPLYING THE SPLINT.

Let us consider in detail some of the ways in which we use this material after it has been prepared as above.

First After Cautery Work.—Practically all this work is confined to the inferior turbinate, and is only done there in selected cases. Immediately after the cautery we apply a hot weak carbolic acid solution to control any oozing; we then use an antiseptic oil spray and introduce the splint as shown in the illustration. It is applied over the full length of the burn, care being taken not to push it too far back as that will produce a choking sensation. The width of the material as supplied being a little in excess of the distance from the anterior to the posterior nares in the adult, in cases where a groove is burned along the entire surface but very little need be removed.

It is best in these cases to have the splints full length, for the patient will speedily inform one as soon as it is too far back; and above all, it is desired to avoid a posterior adhesion, which might happen were the splint too short. After the splint is introduced and it is pushed up in place the anterior end is bent to the septal side and made to conform to that surface, rendering it invisible and more comfortable to the patient. We have yet to find a patient who complained of serious discomfort caused by the splints.

The after treatment is simple. We leave the first splint in for four or five days, having the patient report each day chiefly to see that the splint is in proper position, though in only a few cases have we found that they changed their position. We instill a few drops of weak adrenalin solution wash around the splint thoroughly and follow by an antiseptic oil spray.

As a rule the patient has some breathing space along the sides of the splints and sufficient space to expel the secretions, which, of course, are more abundant than under ordinary conditions. About the fifth day, as a rule, the first splints are removed, the site of operation thoroughly cleansed and inspected and new splints inserted. We do this not only for the purpose of cleansing and inspecting, but also because we have found that if left in longer the splints sometimes break in two, and this we try to avoid, for while not a danger, it is annoying and apt to frighten the patient. This accident has happened several times in patients who did not return for after treatment, and while we have never had any difficulty in removing the different portions, such might happen if the patient should go to some other surgeon, especially as the material we use is exactly the color of mucous membrane.

The second splint also remains in about five days, the patient returning each day or every other day, according to the progress of the case. To be efficient, of course, the splint must remain in position till the membrane is healed. We advise against being afraid of leaving the splint in too long. Very often at the end of four or five days if the splint is removed the space will look clear and free, but if the splint be discontinued at this time and if the patient should remain away adhesions are almost sure to follow. Then, too, there is no particular necessity for haste in their removal. The fact that we have had patients remain away from the office over a week without any treatment whatever shows that the paraffin splints are very well borne and can in no sense be considered as irritants.

In none of these cases was there any evidence of infection or odor due to retained secretions, despite the fact that the patients had gone so long without nasal cleaning.

Second, After Submucous Resections of the Septum.—In these cases we use the Bernay splints for the first forty-eight hours, after which they are removed and the paraffin cut the shape of the Bernay splints, but slightly longer. The splints are applied on both sides and if necessary held snugly in place by a little gauze placed in the anterior nares, the outside of the splint. This gauze is removed as often as soiled. In these cases, of course, the important point is not so much the prevention of adhesions as the support given to the septum, and the paraffin subserves this purpose admirably (Fig. 3). The after treatment is the same as that given under cautery work.

Third, After Turbinectomy.—Immediately after the removal of either turbinate, or a part of either, we invariably pack with a gauze tampon, as we have found that to be the only safeguard against hemorrhages, though we have never used the benzoin collodion dressing. This packing we remove, as a rule, in twenty-four

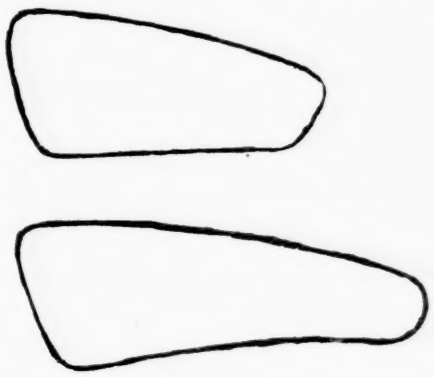

Fig. 3.—Showing splints after submucous resection.

hours, or at the longest, forty-eight, and if the nose be very narrow or if there seems to be any chance of the postoperative swelling bringing the raw surface in contact with the septum we insert a paraffin splint as wide as the anterior nares will admit. We are careful, too, just before introducing the splint to remove any tags or shreds of mucous membrane that escaped detection the day before, as it materially assists the repair of the wound.

It is especially important in these cases where the least tendency to the formation of adhesions exists to allow the splints to remain in position till the wound has thoroughly healed, despite the protests of the patient or the number of times it is necessary to change the splint, for it is in these cases that the most extensive and troublesome adhesions occur, despite the fact that the entire turbinate has been removed at the operation. The after treatment is the same as described, though extending over a longer period.

Fourth, In Septal Deformities, Spurs and Ridges.—In these cases, if possible, we do a submucous operation, though even in that case we generally insert a splint, as it holds the flaps of the membrane down nicely and if any has been removed keeps the wounded surface separated from the turbinate. After treatment is the same as detailed above.

REMARKS.

We do not wish to convey the impression that we resort to this expedient after all our intranasal surgery, though we do so very probably in over 50 per cent. We are certain that it has prevented adhesions for us many times when otherwise these would have formed, and it has thus simplified the recovery and saved the patient much discomfort from separating adhesions with a probe each day.

PARAFFIN IN EYE WORK.

We have used this method in our eye work in practically only one condition. In cases in which there are extensive lesions of the conjunctiva, as in burns, and adhesions are threatened, or after operations for symblepharon we have used the paraffin cast.

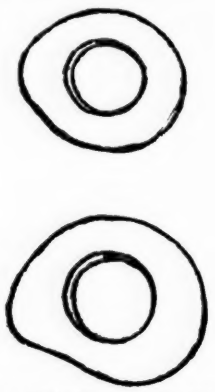

Fig. 4.—Splints used in eye work.

A piece of the material is shaved down to about half its thickness, moulded over an artificial eye, and a circle cut out in the center so that it does not encroach on the cornea; it is then inserted into the conjunctival sac and allowed to remain there as long as necessary. The cleansing and after treatment can be carried out with very little difficulty and the material is well tolerated. We have used it in this manner in three cases, and in all it proved satisfactory (Figs. 4 and 5).

Fig. 5.—Side view of splints in Fig. 4.

This method of employing paraffin, so far as we are aware, is original. The senior writer of this article conceived this idea while working with Dr. Mueller at the Poliklinik at Vienna and spoke of it to him; owing, however to the difficulty of obtaining the material but very little opportunity was given for a trial of the method. This was in 1898. Since returning to this country, however, it has been used in our office continually, and its field of usefulness seems to extend. We offer this to those interested in this work, believing it to be a useful device in the class of cases that we have described.

Protection of the Eye in Radiotherapy of the Lids.—The *Revue Gén. d'Ophthalmologie* for January contains a communication from Van Duyse and De Nobele describing the fine results obtained with radiotherapy applied to the eyelids and adjacent parts without fear of injuring the eye. The eye is protected with a shell made like an artificial eye which is placed over the eyeball after it has been anesthetized with cocain. The shell causes no disturbance while it protects the eyeball completely. It is made of what is called "Paris enamel." Experiments with shells made of metal, glass and other materials showed that they were either irritating or were permeable for the Roentgen rays.

THE MEDICAL DEPARTMENT OF THE ARMY AND THE ADVANTAGES IT OFFERS TO THE YOUNG PRACTITIONER.

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CHICAGO.

Medical students and young practitioners should be acquainted with the advantages to be gained by entering the Medical Department of the Army, and a brief survey of the subject may prove of interest and benefit to them, as well as reciprocally beneficial to the service, by drawing to it desirable candidates.

Representatives of the Medical Corps of the Navy and of the Public Health and Marine-Hospital Service have described the advantages to be derived from entering their respective services. While these undoubtedly offer attractions equal in degree to those held out by the Army, it is proper that all sides of the question should be presented in order that a young physician who makes up his mind to enter one of the public services may make his choice according to his taste and temperament. I shall endeavor to give a plain, unvarnished statement of facts concerning the Medical Corps of the Army to enable one to decide intelligently whether or not it will be to one's interest to enter the corps. Very few physicians who receive appointments as assistant surgeons ever leave the service, and it will be discovered that in those rare cases some good business opening in civil life, or the inheritance of a large fortune, or something of the kind, is the reason for their withdrawal. It is also significant that in many, if not in most instances, when men have resigned from the service they have reentered it at a later date or have endeavored to do so. Two talented and accomplished young medical officers resigned from the Army a short time ago on the strength of flattering offers in civil life, and soon came back asking for readmission, but unfortunately they were barred by the age limit.

The Surgeon-General has had printed a pamphlet entitled "Circular of Information in Relation to Appointment in the Medical Corps," which gives all the data requisite to a complete understanding as to how to get in, pay, emoluments, duties, examination, etc., and can be obtained by request made to the Surgeon-General, U. S. A., Washington, D. C. I shall endeavor to point out to you on this occasion the advantages to be realized from an appointment in the Army based largely on my own experience.

First, let us consider the question from the abstract standpoint of personal advantage to be obtained from a commission. Temperaments and aspirations differ and some men have the idea that the opportunities of an able and ambitious surgeon would be confined within narrow limits by the discipline and subordination required by military life, and that he would have no chance of attaining the eminence offered by the wider field of civil practice. This is an error. An able man has as great, if not a greater, opportunity of rising to fame in the medical service of the Army as he enjoys in civil life. Laveran, a French military surgeon, elucidated the mystery of malaria, and Reed, of our own Army, discovered the cause of yellow fever—two discoveries that have done more to advance sanitary science and to effect the practical reduction of human mortality than any others since Jenner demonstrated the protective power of vaccination. The names of Reed and Laveran are not

the only ones which have been rendered immortal by their work; there are many others. Beaumont, Billings, Otis, Woodward, Tripler and Sternberg are a few whose names occur to me at this moment. Baron Larrey, Esmarch and Longmore are military surgeons whose names are doubtless familiar to you all.

Indeed, in the greater freedom from business cares guaranteed by a fixed salary and in the ampler leisure afforded to the army surgeon by his well-defined duties, the man of scientific inclinations should find greater opportunity for scientific work which should give him reputation and standing than he would be likely to find in the midst of a busy, bread-getting practice.

The question of bread-getting is at once and finally settled for the newly commissioned Assistant Surgeon. But the question may be asked, Would not the opportunities for pecuniary gain be greater in civil life? I will answer, Only in exceptional instances, and it must be borne in mind that life and health are uncertain assets, and that lost health means lost practice and lost income in civil life, whereas in case of disability in the Army the pay goes on, and provision is made for retirement on three-fourths pay in case of permanent disability incident to service or for age. The pay and emoluments of officers are ample for all necessities at first, and later, when increased by rank, it will be found an easy matter to lay by a portion of the monthly pay for subsequent investment. It must be understood that the pay proper does not represent all the income of an officer by any means. In addition to his monthly salary, with its percentage increase from length of service, he draws commutation of quarters at the rate of $12 a month for each room to which he is entitled, in case he is not furnished with quarters when on duty. His mileage when he makes an official trip without troops is usually greater than his outlay; he buys commissary and quartermaster supplies at the prices paid for them by the government, which is less than wholesale rates; fuel is furnished him at a cost of about one-half the amount his civilian neighbor pays for it; he is entitled to forage for two horses; he is supplied with stationery, and, finally, when he serves outside the continental limits of the United States, he draws an additional increase of 10 per cent. on his pay. In case he is a married man, or has any one dependent on him, he can guard against their future needs by an insurance policy, which during his life he can easily keep paid up. In short, the advantages arising from a fixed income are so many and so obvious that their consideration need detain us no longer.

Consider, for a moment, the difference between the practice of medicine in the Army and in civil life. The fundamental necessity for success in either case is thorough professional knowledge, backed up by some natural ability, but in civil life there is a third qualification which is as necessary as either of those mentioned, namely, business ability. In the Army, the latter is not an important factor, and the surgeon with business ability has no advantage in winning a record for efficiency over his brother officer who is not so gifted. The business side of a medical man in the Army finds its sphere in administrative work, which deals with reports and returns and the control of men, and that is a matter of special training. This is a part of the Army doctor's training that is as indispensable to his efficiency as his professional knowledge, and in certain contingencies even more so. I may remark, in passing, that it is this deficiency in the newly appointed volunteer surgeon, his lack of knowledge of army methods, that detracts so from his usefulness in war time, no matter how profound his knowledge of medicine and surgery, and which causes disorder and confusion all along the line, with the dire results which we recently witnessed during our brief war with Spain.

In civil life, the physician seeks a practice; in the Army the practice seeks him. In civil practice, the physician must cater, to a certain extent, to his patient's whims, possibly to the degree of administering a placebo; in the Army, the practitioner is at liberty to exercise a somewhat freer hand in dealing with the sick and to follow out his own ideas as to treatment. It is the duty of the Army surgeon to supervise the hygiene of the command and to recommend such measures as he may deem necessary to prevent or to diminish disease; and in doing this well he enhances his value to the government and tends to reduce his own share of professional work.

It may be of interest to those who have had no connection with the military service to hear something about the exact nature of the duties of a medical officer of the Army. The course at the Army Medical School, which all approved candidates are required to attend, includes, in addition to medical, surgical and sanitary instruction, a course of lectures on the duties of medical officers in time of war and peace, property responsibility, examination of recruits, certificates of disability, reports, rights, privileges, customs of the service and transportation of the wounded. On entering on his duties with troops he will at once realize the great value of this instruction and will be enabled to discharge his duties with much greater readiness and ease. There will, of course, be a great variety of medical and surgical work to be done, and opportunities to engage in special work for which the medical officer may be particularly qualified will not be found lacking—for instance, in surgery, in sanitation, in chemical, pathologic, microscopic and bacteriologic investigation, etc.

When the rank of lieutenant colonel or colonel is reached, especially the latter, the duties are almost certain to be of an administrative character, as commanding officer of a large general hospital or as chief surgeon of a department.

Desire to attain the grade of surgeon-general is, of course, a laudable ambition, and the office may be reached by any capable and worthy medical officer who demonstrates qualifications of the proper kind. The office is held by the incumbent as a four years' detail, as it is in the Navy, but the President may prolong the detail. Even should a surgeon-general revert to the grade from which he was promoted, when he reaches the retiring age he is retired as a brigadier-general.

There is another marked advantage which the military service offers to a physician, especially to a young man who is just starting out in his practice. In civil life, the doctor must equip his office with books, instruments and furniture at his own expense; he must buy his own medicines, if he is doing a country practice; pay the rent for his office and furnish the forage for his horse or horses. In the Army, the government furnishes all these liberally and, in addition, all the leading medical journals published in the English language. This effects a very considerable saving in the course of time and is well worthy of serious consideration.

In the military service, one does not have the opportunity of making a permanent home, but is subject to orders and must be ready to shift his *lares et penates*

when his orders come to change station. The allowance of baggage transported at public expense, however, is ample for all practical purposes. A first lieutenant is allowed 6,000 pounds, a captain 7,200 pounds and a major 8,400 pounds. These amounts will cover all articles necessary to housekeeping in the Army, and if the officer is unmarried the allowance will be found much in excess of his needs. Besides this, the government allows a maximum of $100 for each horse allowed and transported for a mounted officer and also transportation for an attendant. A change of station, therefore, ordinarily can be made without the incurrence of any expense to the officer concerned. His own personal expense for railroad fares and sleeping cars is more than covered by his mileage allowance, as he is allowed a first-class ticket and 4 cents a mile in addition. It will be seen that a move from one post of duty to another is not to be dreaded on account of expense.

Naturally a subject of much interest to an army officer is that of promotion, because with it comes greater authority and increased pay. What is the prospect in the medical department for a satisfactory rate of promotion? At the present time, the organization of the department is not wholly satisfactory in this respect, Congress having added too many officers of the lower grades and too few of the higher grades in reorganizing the corps early in 1901. A new bill, having in view an increased efficiency of the medical department, was prepared by the Surgeon-General two years ago, and at the last session of Congress it was passed by the Senate, and the sense of the House of Representatives was largely in its favor, but the ruling of the speaker blocked its passage. The President, the Secretary of War, the Senate, the Military Committee of the House, the American Medical Association and the country at large are all in favor of the passage of this bill, and the report of the committee of medical officers having it in charge shows that great progress has been made and the probability of securing favorable action at the present session of Congress is most gratifying. This bill increases the higher grades and places the corps on a basis much more attractive to an ambitious young man. Its passage at an early date seems absolutely assured, and, as over 20 vacancies exist at present in the corps, an early entrance is highly important, as promotion goes by seniority, and a stand a few files higher in the list means the attainment of a superior rank a year or two in advance of those who may enter a few months later.

In conclusion, it may not be amiss to say a few words concerning social life in the Army.

Garrison society, as a rule, is very pleasant, and I feel safe in saying that the surgeon will find the officers and their families almost universally delightful people. For the socially inclined young man there is no dearth of entertainment in the way of dinners, card parties, private theatricals, etc., especially at the larger garrisons, so that one need not fear that he will be deprived of the amenities of good society found in civil life.

Variations in Normal Urine.—Evans and Moore, as a result of a series of experiments, state that in a normal individual the composition and character of the urine may vary widely within short periods of time, and that even the twenty-four hours' urine may differ considerably from accepted standards for a man of average size. They also state that the urine excreted during the forenoon is in most respects noticeably different from that of other parts of the day.—*Montreal Medical Journal.*

Special Article

THE PHARMACOPEIA AND THE PHYSICIAN.

GENERAL DISINFECTANTS.

CHAPTER IX.

General Introduction to the Subject of Disinfectants and Antiseptics.

The important subject of antisepsis embraces so many different agents that are used in such a variety of conditions that any convenient consideration of them according to their uses, or according to the principles that are involved, must necessarily be an arbitrary one. For our purpose we shall consider them under three heads: (1) General disinfectants and antiseptics; (2) local disinfectants and antiseptics, and (3) internal antiseptics. Some substances will require consideration under all three headings, but even this will be found preferable to giving, for example, all of the manifold uses of such an article of mercuric chlorid in one place.

Antiseptics were used long before the causes of fermentation or of putrefaction were known, and it would have been remarkable indeed had man failed to perceive the effect of those substances which are capable of inhibiting a process so commonly encountered. The Egyptians preserved the human body against the attacks of putrefactive organisms, without any evident knowledge of the character of the organisms causing decay, by means of balsams which contained such antiseptics as benzoic and cinnamic acids. The epoch-making discoveries of Pasteur, followed as they were by the favorable reports on the use of phenol, or carbolic acid, by Lister, and the subsequent discovery that other substances possessing great antiseptic power were even less toxic to man, gave tremendous force to the pendulum, which was carried entirely too far by the efforts of well-meaning enthusiasts, and in its backward swing much unnecessary skepticism has been aroused.

While the subject of general disinfection does not necessarily form a part of the physician's daily consideration, there are occasions when he is suddenly confronted with the necessity of directing such work, and on the thoroughness with which he does it will depend the safety of other members of the community. While there is no great difficulty in securing thorough disinfection, it is absolutely necessary that certain rules be rigidly complied with and this can not be done without an exact knowledge of the object that is to be accomplished and of the means with which the accomplishment is to be brought about. There is probably no condition where a little knowledge can prove to be more dangerous than in this very matter of disinfection, and we therefore have no apologies to offer for going into detail on a subject that may be considered commonplace or well understood.

Sunlight and Heat.

The best of all disinfectants is bright, direct sunlight, coming into immediate contact with the individual germs, not merely shining on one side of a thick garment or carpet, or on small masses of sputum, blood, pus or decaying meat, but shining on and penetrating each individual micro-organism. When this can be accomplished all germs—not all spores—are killed in a few hours. But sunlight is not dependable unless all of the necessary conditions can be rigidly complied with, as may be done with impervious flat surfaces (floors), or linen and other thin garments, both sides of which may be exposed to the direct rays of the sun. The disinfection of articles infected with the more virulent pathogenic organisms usually requires other, more directly active, means than that of sunlight, with the attendant danger of further dissemination, and chemic disinfectants or heat must then be employed.

The direct flame instantly destroys all forms of microscopic life. Dry air, heated to 160° C (320° F), kills all disease germs—but not all spores—in one hour; but wood will begin to char at 180° C. (356° F.) and even lower, so that dry hot air is not applicable as a certain means of disinfection in all cases. Simple drying kills bacteria; but masses of sputum or other organic matter may preserve the organisms in their interior for an indefinite period, while spores are thus preserved for years.

Moist heat, water or air saturated with aqueous vapor, heated to 75° C. (167° F.), is rapidly fatal to most bacteria. Water containing typhoid bacilli is rendered much safer by heating to even this comparatively low temperature for ten minutes. Boiling water, on the other hand, will kill even spores in ten minutes or more if they are not protected in small masses. When such masses do exist, 1 p r cent. of soda or soap should be added to the water to dissolve the albuminous and other organic matter and at the same time to raise the boiling point slightly. Metallic instruments do not rust in water containing caustic soda, washing soda, baking soda or borax.

Moist steam, or air which is *supersaturated* with steam, is rapidly fatal, but superheated dry steam is not so quickly fatal as is the moist at a much lower temperature. Pressure, moisture and increased temperature increase the effectiveness of all methods of disinfection. Moist steam penetrates better than dry air, but heavy fabrics may protect micro-organisms, and particularly spores, for a considerable time, and many articles, such as mattresses, can not be readily disinfected even in this way.

Chemical Disinfectants.

Bedrooms and their contents may be disinfected by the now official:

LIQUOR FORMALDEHYDI.—U. S.—Solution of Formaldehyd, containing about 37 per cent. by weight of formic aldehyd, an oxydation product of methyl alcohol. This substance may be applied directly by washing or spraying, or it may be used in the form of vapor. For the latter purpose the windows and doors are tightly closed, paper being used to stop up the crevices, carpets should be removed or suspended and all drawers and closets opened and their contents so placed that the vapor will readily reach and penetrate every particle of fabric. Formaldehyd solution is then vaporized either in the room or through the keyhole with enough water to saturate the air in the room. Considerable loss of formaldehyd occurs through decomposition during vaporization by heat, and it is, therefore, preferable to saturate sheets with the requisite quantity and suspend them in the room which is to be disinfected, or, better still, the solution may be sprayed from an atomizer. The keyhole is then plugged and the room allowed to stand for from 12 to 24 hours. Novy advises 150 c.c. (5 fl. oz.) of the 40 per cent solution, corresponding to about 165 c.c. (5½ fl. oz.) of the official, for each 1,000 cubic feet of air space. To increase the efficiency of the formaldehyd, 3 liters (3 quarts) of water are vaporized into each 1,000 cubic feet of space. If the atmosphere is damp, less water will be required, of course. Under ordinary conditions it is cheaper to destroy inexpensive mattresses than to disinfect them thoroughly. If they are of straw, destruction is most readily accomplished by burning them out of doors.

CALX.—U. S.—Lime, calcium oxid, constitutes an inexpensive and very useful disinfectant that has a number of widely varying uses. Infected urine, vomit and feces may be thoroughly disinfected by being received into a vessel that contains freshly prepared milk of lime. It is essential that this be freshly prepared, as calcium hydrate rapidly absorbs carbon dioxid from the air and is thereby changed into the inactive calcium carbonate. Milk of lime may be prepared by putting a few pounds of lime into an iron pot and adding about half as much water; the lime rapidly falls into a dry powder with the evolution of heat; to this powder add three times as much water and stir well. The resulting mixture will keep for several days without deteriorating sufficiently to be inert. There are, of course, several precautions to be observed: The lime must be recently calcined, or fresh, and the person who slakes it should be careful to avoid the irritant dust which arises during the process; then, too, the heat generated may be sufficiently high to char wood or to set fire to readily combustible materials. For disinfecting feces or other substances they should be thoroughly stirred with an equal quantity of the milk of lime, or, better still, with twice the quantity, the mixture being allowed to stand for two hours.

Milk of lime is also useful for disinfecting floors, cellars, cesspools after draining, and even walls when they are not subject to injury. It must always be remembered that this whitewash rapidly absorbs carbon dioxid and thus becomes inert, hence the mixture is an efficient disinfectant, but is not useful as an antiseptic.

Unslaked lime is a cheap and very efficient means of destroying animal matter and is also useful for absorbing moisture in damp cellars. As noted before, certain precautions are always to be taken in connection with this really active chemical substance. Cesspools are difficult to disinfect. Large quantities of milk of lime are effective, but the contents must be thoroughly mixed with the disinfectant, whatever its nature.

HYDRAGYRI CHLORIDUM CORROSIVUM. — U. S. — Corrosive Mercuric Chlorid, bichlorid of mercury, mercuric chlorid, or, as it is most commonaly called, corrosive sublimate, will be considered more extensively in connection with local antiseptics. It has, however, a number of very important uses in connection with disinfectants.

Corpses of persons dead of an infectious disease should be immediately wrapped in cloths saturated with a 1 to 1,000 solution of mercuric chlorid. The addition of 20 per cent. of glycerin to the solution of mercuric chlorid will prevent the rapid evaporation of the water, which leaves the mercuric chlorid as a dry powder in the cloth. Water which has been used to bathe a person suffering from an infectious disease, such as typhoid fever, should be disinfected by heating to near the boiling point or by the addition of a liberal quantity of milk of lime or a much smaller quantity of mercuric chlorid. If the bathtub is of metal, this chemical should not be used, but phenol or cresol may be substituted.

FERRI SULPHAS.—U. S.—Ferrous Sulphate, preferably the impure or crude article, commonly called copperas, is an excellent deodorizer for animal excretions, the iron uniting with the albumin and the acid with the ammonia; it is not a very active disinfectant.

CUPRI SULPHAS.—U. S.—Copper Sulphate, or blue vitriol, may be similarly used, but it is much more expensive and possesses no marked advantages over copperas as a deodorizer.

SULPHUR SUBLIMATUM.—U. S.—Sublimed Sulphur, or flowers of sulphur, is frequently burned as a disinfectant, in rooms which contain nothing which can be injured by the corrosive action of the resulting sulphurous oxid. It is not so frequently used now that formaldehyd affords a more satisfactory means of disinfection, but it is cheaper and may be used to advantage in cellars and in empty rooms, that can be thoroughly sealed. Hoppe-Seyler recommends that 15 gm. (½ oz.) be burned for every cubic meter (cubic yard) of space. This would be equivalent to about 1,500 gm. (3.3 lbs.) for 1,000 cubic feet. Rooms should be left tightly closed for from twenty-four to forty-eight hours, then the fumes of acid still remaining may be readily absorbed by sprinkling ammonia in the room. As with formaldehyd disinfection, the vapor must come into actual contact with the micro-organisms and the atmosphere should contain moisture. This latter requirement is usually met by burning the sulphur in a double vessel, the outer one containing water.

The gas that is generated by the burning of sulphur is very poisonous to man, due to its local corrosive action. Spasmodic closure of the glottis may occur, causing death. Sulphurous oxid, the substance that is thus generated, remains free in mixtures of organic matter longer than free chlorin, hence it is a more effective bactericide.

CALX CHLORINATA.—U. S.—Chlorinated Lime, popularly, though improperly, called chlorid of lime, is a ready source of chlorin and is a very convenient and inexpensive disinfectant suitable for many of the purposes for which sulphurous oxid might be used. Chlorin, like sulphurous oxid, is very corrosive, attacking metals, and bleaching and destroying fabrics. Chlorinated lime is useful sprinkled about urinals, damp cellars, outhouses, stables and drains. It rapidly deteriorates on exposure to the air and is not efficient unless it has a very strong odor of chlorin.

The various chlorids that are sold at fancy prices are usually feeble and are in nowise superior to a readily made mixture of a quarter of a pound of chlorinated lime with half a gallon of water. The admixture of an acid at the time of using causes the rapid liberation of chlorin and increases the disinfectant action.

LIQUOR SODÆ CHLORINATÆ.—U. S.—Solution of Chlorinated Soda, the so-called Labarraque's solution, is but another form of a chlorin compound. It has the one advantage of being free from insoluble caustic material.[1]

PHENOL.—U. S.—Phenol, the Acidum Carbolicum of the U. S. P. 1890, is much more expensive and not nearly so efficient, as a disinfectant, as:

CRESOL.—U. S.—Cresol has been included in place of the formerly official crude carbolic acid. It is a mixture of the three isomeric cresols, found in coal tar, and is a useful and highly efficient disinfectant and antiseptic.

LIQUOR CRESOLIS COMPOSITUS.—U. S.—Compound Solution of Cresol consists of a mixture of equal parts of soap and cresol. When properly made this mixture is an admirable substitute for any one of the numerous soluble or semi-soluble proprietary preparations containing cresol; such as creolin, cresolin, lysol, lysitol and a host of others too numerous to mention.

Compound solution of cresol is practically identical with the Liquor Cresoli Saponatus of the German Pharmacopeia; it is miscible in all proportions with water, and, as noted above, is a reliable and readily available disinfectant.

One part of the compound solution of cresol added to twenty parts of very warm water is useful for the sterilization of surgical instruments, and a slightly weaker solution, made by adding one part to thirty of warm water, affords an excellent disinfectant for the hands.

POTASSII PERMANGANAS.—U. S.—Potassium Permanganate, the chameleon minerale of Scheele, attacks all forms of organic matter and is generally useful for the destruction of foul odors, but is not very useful as a disinfectant. It will be considered at greater length in the succeeding chapter.

The strong mineral acids are destructive to bacteria, but their application as disinfectants is necessarily very limited. As noted before, mercuric chlorid is to be classed with the most powerful of all disinfectants in general use, one part in 10,000 being fatal to spores. Like all other chemical disinfectants, its activity is increased by heat. It precipitates albumin and its activity is, therefore, materially lessened by the presence of any appreciable amount of organic material; this disadvantage of mercuric chlorid may be obviated in part by the addition of an equal amount of sodium or ammonium chlorid (or a small amount of hydrochloric acid), the tablets found on the market for preparing the solution always containing the requisite quantity of one of those salts. As it attacks metals, it is not suited for the disinfection of instruments or metallic vessels. One part of mercuric chlorid in 50,000 parts of water has been demonstrated to possess decidedly antiseptic properties. Its comparative non-volatility, its property of attacking metals and of combining with albumin, and its extreme toxicity limit its field of application, but it remains by far the cheapest antiseptic we have for general use.

Copper sulphate shares with copperas (ferrous sulphate) the power of deodorizing decomposing organic matter though it is but little used for this purpose. It has recently been claimed that the merest traces of copper sulphate, or of copper, in water readily destroy the bacillus of typhoid fever, or at least completely inhibit its growth; even though the copper is present in quantities too small to interfere with the use of the water for drinking. The results of different investigators are not uniform, however, and some maintain that the antiseptic power of copper and its salts has been greatly overestimated. The soluble salts of zinc, particularly the chlorid, have also been used for disinfecting purposes, but as they share with copper the disadvantage of being comparatively expensive, without any accompanying material advantages, a more detailed consideration of these substances may be omitted in this connection.[2]

Clinical Thermometers and Hypodermic Syringes.

The disinfection or sterilization of clinical thermometers and of hypodermic syringes and needles deserves especial mention. With the present comparatively low price of clinical thermometers there is little or no excuse for not having an individual thermometer for at least every patient ill with an infectious or a contagious disease or a continued fever. But even this precaution, desirable as it certainly is, does not obviate the necessity for disinfecting or sterilizing the thermometer. The necessary disinfection may be effected in a number of ways, the thermometer may be dipped for a few minutes in strong phenol, the solution of cresol, or in the now official solution of formaldehyd, after which it is thoroughly rinsed in water. Where an individual thermometer is provided it may be sterilized by keeping the bulb immersed in 75 per cent. alcohol, a saturated solution of boric acid, the official liquor antisepticus, or in a mixture of equal parts of antiseptic solution and of solution of hydrogen dioxid. It must appeal even to the least careful that the disinfection of clinical thermometers is a precaution so essentially important that it should never be neglected.

The hypodermic syringe and needle should be disinfected with strong phenol or cresol solutions, solution of formaldehyd or by repeated washing with very hot water, as a purely routine procedure. When a syringe and needle are known to be infected the disinfection should be as thorough as that of other surgical instruments.

Solutions intended for hypodermic injection can be sterilized by boiling, when this does not cause decomposition. With the now widely used hypodermic tablets it is preferable to boil the necessary quantity of water, or better, distilled water, for a minute or two, then add the tablet, avoiding all unnecessary handling, and heat sufficiently to insure thorough solution. Cocain, being readily decomposed, can not be boiled, but the solution may be sterilized by heating to about 80° C. (176° F.) for thirty minutes on two successive days. It will usually be found to be preferable, however, to use freshly prepared solutions that have been made in a sterile bottle with recently boiled and sterile distilled water. Eucain and stovain solutions may be boiled, but these substances themselves are not entirely free from objections.

Under the subject of internal antiseptics we shall have occasion to mention the disadvantages of sterilized milk, but here we may call attention to the widespread use of formaldehyd, salicylic acid and other chemical antiseptics for the preservation of foods. While we are by no means certain that minute quantities of many of these chemical antiseptics are in themselves injurious, we have ample authority for the opinion that their continued use in appreciable quantities is by no means beneficial. Schmiedeberg regards the constant use of even small quantities of salicylic acid, for a continued period, as unwise in the present state of our knowledge, and Sollmann says that the use of formaldehyd can not be too strongly condemned, because of the specific irritation of the mucous membranes which it causes.

The whole subject of food preservatives, however, while it is a vitally important one, and one in which the physician should, and indeed, must be actively interested, is entirely too extensive to be discussed at length in connection with the present series of articles.

1. Where an inodorous deodorant is required it will be found that the Liquor Zinci et Alumini Compositus of the National Formulary will give better and more uniform satisfaction than proprietary articles of the same type. It is made as follows:

℞.	Zinci sulphatis		
	Alumini sulphatis, āā	3xxvii	100
	Naphthol	gr. v	3
	Olei thymi	gr. xv	1
	Aquæ, q. s. ad	Oi	500

The salts are dissolved with the aid of heat and the volatile substances added to the solution.

Still another preparation of the same type is the Liquor Zinci et Ferri Compositus—N. F.

2. In this connection we find the following quotation apropos, taken from Wood's "Therapeutics," page 823: "There are not many affairs in life in which the public has been so superabundantly fleeced as in the matter of disinfection. A most extraordinary part of this swindling is the ease with which distinguished members of the medical profession have given certificates of efficiency and value to comparatively inert and extraordinarily expensive proprietary compounds. Oddly enough, the cat that has drawn the chestnuts out of the fire for avaricious manufacturers has not even had the sense to smell the odor of its own paws when burning." It is evident that Dr. Wood knew less of the resources and the wiles of nostrum makers, and their shrewdness in duping physicians, than he supposed, else he would not think it extraordinary that so many have been deceived.

The subject of preservatives, however, is also of interest in connection with medicines and medicinal preparations. The antiseptic action of alcohol, glycerin, sugar and of volatile oils is well known and generally recognized, while not of sufficient importance to be considered in connection with general disinfection, these substances are widely used as preservatives not alone for medicinal preparations and foods, but also for other substances and materials.

(To be continued.)

Clinical Reports

A CASE OF EPITHELIOMA OF THE FACE.

TREATED BY THE ACTUAL CAUTERY, THE X-RAY AND BY INCISION.*

J. H. WOODWARD, B.S., M.D.

NEW YORK CITY.

History.—Mr. ——, about 70 years of age, presented in the spring of 1903 a small ulceration one-fourth of an inch in diameter in the left side of his face, near the ala of the nose, which had existed more than a year. The area of disease was limited to the immediate neighborhood of the superficial ulceration.

Treatment by Actual Cautery.—In May, 1903, I burned it out with the galvano-cautery. The wound so made healed promptly without incident, leaving a small, smooth cicatrix.

Treatment by Röntgen Ray.—In November, 1903, ulceration in the cicatrix had begun. Influenced by the very favorable published and verbal reports of the beneficent effect of the Röntgen ray in curing epithelioma of the face, I referred my patient to a very competent surgeon, thoroughly familiar with *x*-ray therapeutics, for treatment by that method.

Report.—To him I am indebted for the following notes of the case while under his care:

"On examination I found a spot about as large as a small, ordinary white bean about three-quarters of an inch beyond and above the ala of the nose, left side. The outer half had healed, the inner part was ulcerating. There was very little induration on the floor and sides of the ulcer. He came to me November 4 and received about three treatments a week until Christmas, making in all twenty-two exposures. The treatments were made with a medium-sized tube, medium vacuum, at a distance of six inches, with an exposure of ten minutes; the face, head and chest were protected by plates of lead and tinfoil. The tube was influenced from a 12-32-inch plate, Wait & Bartlett static machine. Very little effect was observed after four weeks' treatment. The ulcer seemed to have some source of irritation. This was found to be too frequent examination with the finger. The ulcer was then protected with a cotton or rubber tissue and collodion dressing, which was removed during the exposure to the rays. The effect was magical: the ulcer closed at once and remained closed. At this time a lead glass tube, with a terminal diameter of one inch, was used for the remainder of the exposures. This was placed within half an inch of the diseased surface, with an exposure of five minutes. After an interval of two weeks (i. e., beginning Jan. 12, 1904), four more exposures were made at intervals of three days in order to make sure all diseased tissue was destroyed."

The *x*-ray treatment, therefore, practically extended over a period of three months and was thoroughly and painstakingly given by a conscientious operator.

Treatment by Excision.—Early in April, 1904, or a little more than one month after the last *x*-ray exposure, the patient came to me for re-examination. Ulceration had again broken out in the cicatrix. At this time I was strongly tempted to do only a curettage. Fortunately, however, my suspicions had been sufficiently aroused, and on April 6 I extirpated the growth. The operation was made through what appeared macroscopically to be healthy integument at a distance from the apparent disease down to healthy periosteum and healthy perichondrium. The latter was curetted away, because it lay in rather close proximity to the ulceration. The resulting wound was at least one inch in diameter and nearly circular. It was allowed to heal by granulation in order to facilitate later the detection of any cancerous tissue that might have been overlooked, and had closed completely by May 7, leaving a small, smooth scar.

The excised tissue was taken to Dr. F. E. Sond rn for examination, with the especial purpose of ascertaining whether the operation had included the entire diseased area. He reported as follows:

"The cut specimens show a typical picture of epithelioma. Between the lesion proper and the periphery of the specimen there is an area of normal epidermis, the corium showing a small amount of round cell infiltration only. Very near to the periphery, however, the epidermis shows an irregular downward growth into the corium, which shows a decided inflammatory reaction. This looks like an early stage of the disease at the periphery of the specimen."

Further History.—I was surprised to find that the microscopic examination had revealed a more diffuse cancerous infiltration than had been supposed possible in this case. The operation had not circumscribed the growth.

On May 14, 1904, a small collection of pus about the size of a pinhead had developed in the part of the cicatrix nearest the inner angle of the eye. This was evacuated and the small cavity treated with pure carbolic acid. On May 16 the same spot was curetted and in two days the wound had healed.

On June 1, 1904, suppuration had recurred in the same place, and on June 3 the upper portion of the cicatrix and half an inch or more of integument between it and the inner angle of the eye was cut out. This wound was closed by three sutures and healed by primary union.

Report.—Dr. Sondern reported on the excised tissues as follows: "The cut specimen shows a typical picture of epithelioma. There is a proliferation downward of epithelial invaginations into deep tissues and numerous epithelial pearls. There is also some inflammatory round cell infiltration of corium and deeper tissues."

On Oct. 5, 1904, the cicatrix was almost invisible and nothing pathologic was discoverable in the wound region. In November, 1905, eighteen months after the last operation, his only symptom was itching in the cicatrix. I was not able to discover anything pathologic in or about the scar, which was almost invisible, smooth and not adherent. The adjacent skin was normal. Inasmuch as a scar on his forehead carried for many years itches more or less, that symptom in the operation scar may be of no importance.

In May, 1903, the ulceration appeared as innocent as an epithelioma can, and it seemed a simple matter to effect a cure with the actual cautery. A more favorable case for treatment by the *x-ray* than this was in November, 1903, could not be imagined. Naturally, it is not possible to state exactly how far the disease had infiltreated the skin prior to the *x*-ray treatments, but macroscopically the disease was limited to a very circumscribed area. After the *x*-ray exposures, however, it was clear not only that there had been an absolute failure to cure, but that the area of disease had increased considerably. Possibly the actual cautery had acted as an irritant, inasmuch as it had not been applied with a sufficiently free hand to kill all the cancer cells. It is certain that the *x*-ray had operated as an irritant, causing the disease to spread more rapidly in every direction than it would have done if undisturbed. The lapse of time alone does not account for the marked changes in the conditions, especially those that occurred between November, 1903, when the *x*-ray treatment was begun, and April, 1904, five weeks after the last *x*-ray exposure had been made.

Experience in this case teaches that the ancient and honorable method of early and complete excision should have been the method of choice. Objection to excision

* Read before the Society of the Alumni of Bellevue Hospital.

of growths about the face is urged on the assumption that noteworthy disfigurement is a necessary consequence of cutting operations. We know that such arguments are not valid when excision is made in the incipiency of the disease. In all other cases the question of cure is paramount.

A remedy for cancer that is lauded because its application does not disfigure the patient must possess curative properties superior to any other known treatment to entitle it to respectful consideration. In this case, the history of which has just been related, the *x*-ray proved to be not only a dismal failure as a cure, but it was positively harmful, both in wasting time and in stimulating the cancer's growth.

Bodine's method of using cocain locally enables the surgeon to avoid the objection to, and the dangers and disagreeable features of, general anesthesia, and promises the practical certainty of a painless operation. In my patient's case a positive history of attacks of true angina pectoris was an important factor. It seemed advisable at the operation of April 6, 1904, to give the patient a hypodermic of morphin before injection of the cocain solution was begun, because it is the systemic antidote to cocain and also the most potent agent we may employ in angina pectoris. This precaution was probably unnecessary. In the second cutting operation the use of morphin was omitted. In both instances no untoward cardiac symptoms were observed either during or subsequent to the operation.

58 West Fortieth Street.

A CASE OF SYPHILITIC DACTYLITIS OF THE TOE.

ASTLEY PASTON COOPER ASHHURST, M.D.
Surgeon to the Out-Patient Department of the Episcopal Hospital.
PHILADELPHIA.

Patient.—R. E., aged 40, applied to the surgical dispensary of the Episcopal Hospital April 20, 1904, for treatment of his left foot.

Examination.—The foot was moderately swollen, with two areas of superficial ulceration on the dorsum, and with the middle toe the seat of a swelling so typical of syphilitic dactylitis as seen in the fingers, that the specific nature of the lesions was readily determined. The patient stated that the ulcerations of the dorsum of the foot had persisted more or less in their present form for a period of eighteen months and that the toe had been in its present state for about six months. He had tried various salves and ointments, but so far no form of application had proved of any avail. On further inquiry it was learned that twelve years previously the man had had a sore on the penis, which, although accompanied by suppurative inguinal buboes, was nevertheless followed later on by an evanescent skin rash. Antisyphilitic treatment had been employed for about six weeks. The accompanying illustration, kindly made for me by Dr. R. S. Hooker, shows very well the appearance of the foot and toe when the patient came under my treatment.

Treatment and Result.—The ulcers were dressed locally with dilute citrin ointment, and iodid of potash was administered internally. Improvement was rapid, the ulcers healed, and the dactylitis disappeared, so that in the spring of 1904 the foot was practically normal. I heard from this patient in November, 1905, and learned that he has taken the potassium more or less regularly ever since being under my care; he says he learned by experience that soon after stopping the medicine he was prone to develop ulcers or sores in some part of his body. His foot has given him no further trouble.

Syphilitic dactylitis was first accurately described by Dr. R. W. Taylor,[1] of New York, in 1871. The affection had been alluded to previously by one or two writers, but it had never before been fully studied. When Van Harlingen, in 1882, wrote the article on "Syphilis" for the International Encyclopædia of Surgery, he could find less than twenty-four cases of the affection recorded. It occurs in two varieties: The more common variety affects the subcutaneous tissues and the fibrous structures of the joints; the other arises in the periosteum and the bones. It does not, as a rule, make its appearance until five to fifteen years after the primary lesion.

Syphilitic Dactylitis.

It appears to be distinctly rarer in the toes than in the fingers. I have observed two cases of syphilitic dactylitis of the finger in the dispensary of the Episcopal Hospital, one being a manifestation of hereditary syphilis in a child, the other occurring in an adult. In the finger it is nearly always the proximal phalanx that is affected; but in the toe, as is evidenced in the case herewith recorded, the swelling usually extends throughout the whole length of the affected digit. As remarked before, the appearance is characteristic, and even if no syphilitic history could be elicited I think the true cause of the lesions would be readily determined.

1. Amer. Jour. Syph. and Derm., 1871, vol. II, p. 1.

OSTEOMA OF THE OUTER SURFACE OF THE ULNA.

C. B. CLAPP, M.D.
Surgeon in charge, Wabash Employés' Hospital.
MOBERLY, MO.

Patient.—J. S. H., aged 28, section laborer, when about 10 years of age noticed a small lump on the outer surface, near the lower end of the right ulna, which has slowly yet constantly grown until the present time. He does not remember any traumatism to this part at any time.

Description of Tumor.—The tumor itself measures 7½ inches in circumference; its surface is rough and jagged, resembling the cauliflower somewhat in appearance. The radiograph (Fig. 1), which was taken by me before the operation, shows clearly the usual shortening of the shaft of the ulna and the drawing away of its articular surface from the wrist joint. It also shows the peculiar curving of the shafts of both the bones of the forearm, compensating, in part, for this development, and also the malposition of the distal extremity of the ulna. Since

the operation the distal piece has acquired a more normal position and will doubtless adapt itself more closely to the wrist joint in time and thereby afford material strength.

Remarks.—It is interesting to note that this man has always done the heaviest kind of manual labor, using the shovel constantly for days, driving spikes with a heavy sledge, lifting

Fig. 1.—Showing the shortening of ulna and malposition of articular surface.

steel rails, handling ties, and all work usually done by a man on the section, and at no time, either before or since the operation, has he noticed that this wrist or arm tires before the other, or is weaker than the other.

New Instrument

A NEW ANOSCOPE.

T. CHITTENDEN HILL, M.D.
Surgeon to the Rectal Department of the Boston Dispensary.
BOSTON.

This new instrument, which I devised for a special case, has proved of such general utility in the treatment of affections of the lower rectum and anal canal that a brief description of it may be of interest:

For examinations and treatment of the rectum proper and pelvic colon the round tubes of Kelley and the later pneumatic modifications of these leave nothing to be desired but for the treatment of ulcerations, abrasions, new growths, etc., of the anal canal the specula in common use have not at all times been satisfactory. A diagnosis can be made by digital examination, but it is often important to have a good view of the lesion in making local treatments. With this simple instrument I have treated many patients who otherwise would have been obliged to undergo general anesthesia.

It consists, as the cut shows, of a straight glass tube with an oval window in the side. The lower end is rounded and punctured by a small hole which allows air dilatation of the rectum. The handle is detachable and to prevent cracking of the glass it should be removed when the instrument is sterilized.

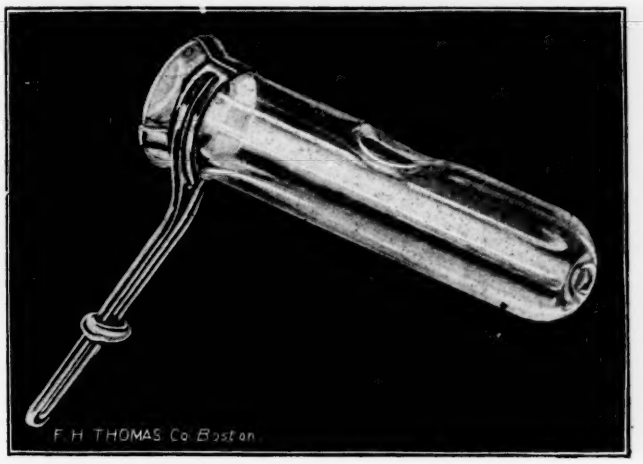
METHOD OF USE.

With the patient either on the elbows and knees or in the right semi-prone position the distal end is smeared with vaselin and pressed firmly over the anal orifice. Then as the patient strains down the instrument slips easily past the sphincters.

Should there be an excess of vaselin about the window in the instrument it is wiped away with a cotton swab. By gently rotating and partially withdrawing the tube the whole anal circumference can now be thoroughly explored without discomfort to the patient.

ADVANTAGES.

The following advantages are claimed for this speculum over



others now in use: The round tube is the most easily introduced when there is spasm of the sphincters, which is nearly always the case in disease in this locality. The edges of the oval window are so smooth that rotating and withdrawing it does not pinch the mucous membrane and thus cause pain—and what is more important, the mucous membrane anterior to the part being examined is firmly supported and thus a good view is obtained.

In the bivalve specula and the conical fenestrated ones with removable blades, the mucous membrane so prolapses into the instrument that a satisfactory examination is often impossible. Besides, their use is painful and they have to be reintroduced several times in order to examine thoroughly the whole of the anal canal.

When necessary for special cases the window may be enlarged, made smaller, or placed at a different level. The one in the cut, however, has proved suitable for nearly every case.

This instrument I now use almost exclusively when a speculum is required for the examination or treatment of the anal canal. And when it it recalled that more than half of the diseases of the rectum are in this locality its field of usefulness is readily appreciated.

Milk in Pulmonary Tuberculosis.—When any dyspepsia arises from the use of milk, Burton-Fanning advises adding 20 grains (an eggspoonful) of sodium bicarbonate to each tumblerful. The milk may also be given warm, or thickened with some farinaceous food, or it may have a little spirit added. It should not be swallowed in bulk, but should be slowly sipped. With these modifications milk usually agrees, even when drunk at meals with other food. A great deal of milk can be administered in the form of junket or other pudding, to which cream may be added.—*Denver Medical Times.*

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

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SATURDAY, FEBRUARY 24, 1906.

PROTECTION THROUGH NATURAL SELECTION.

There is an almost universal impression existing with special force among physicians that unsuitable hygienic conditions, and especially the influence of widespread disease, in the course of time, brings about degeneration in a race subjected to them. It is not a little surprising, then, to find that an article expressing exactly the opposite ideas has been written by a distinguished student of heredity, whose observations have extended over a long period of time, and who is known as a conservative writer, not lightly to be tempted to express exaggerated notions contrary to usually accepted ideas, merely for the sake of attracting attention. In an article on "Heredity and Social Problems,"[1] Dr. G. Archdale Reid, a fellow of the Royal Society of England, who last year published a book on "Principles of Heredity" that attracted widespread attention, insists that there is conclusive evidence of the erroneousness of the belief that the conditions under which parents live "are a potent cause in variations in offspring subsequently born," and of the mistakenness of the persuasion "that parental ill-health, due to disease, intemperance, bad sanitation, want, hardship and the like, tends to alter the nature of children in such a way that they are rendered innately degenerate."

This is a contradiction, direct and absolute, of the opinion held by many physicians, and consequently Dr. Reid's arguments for his conclusions are worthy of serious consideration. He calls attention particularly to the fact that long-continued exposure to a disease, far from bringing about degeneracy so that the people thus exposed become more liable to it, on the contrary, always leads to the production of a special resistive vitality which enables the exposed people to combat the particular affection to better advantage. Negroes on the west coast of Africa, for instance, have been exposed for hundreds, perhaps thousands, of generations to severe malaria. Practically every negro suffers from the disease and many perish. "No one will say, however," says Dr. Reid, "that the negroes are degenerate. On the contrary, they are a tall and robust race, and, as is well known, every race exposed to the disease is resistant to it precisely in proportion to the duration and severity of its past sufferings." The large number of deaths that have occurred by a process of natural selection has eliminated the unfit. The survivors are not degenerates, but are superior to what they would have been had there been no malarial racial selection.

The same thing holds true for many other races and for many other diseases. Europeans who have been longest exposed to consumption and have suffered much from the disease are more resistant to it than the negroes, to whom tuberculous exposure is a comparatively recent incident in history. Our American statistics seem to bear out this fact very completely. Still lest resistant to consumption are the South Sea islanders, who have had no previous experience of the disease and are exterminated by it when it once gains a hold. Tuberculosis, when first introduced among the American Indians, was much more fatal in its effects than it is at present, as, indeed, were all of the contagious diseases. The Indians still continue to fall victims to these diseases much more readily than the white man, but that seems to be precisely because of the shorter time to which the race has been exposed to them. When America was discovered, except for malaria and yellow fever, we know of no infectious diseases that existed on this continent.

Even more interesting is it to find that in matters usually considered as belonging to the moral side of nature, a race more or less immune seems to be produced by natural selection. The nations which for the longest periods have been freely accustomed to the use of alcohol are those in which there is at the present moment the least intemperance. Many races, as Dr. Reid says, have been afflicted by alcohol for thousands of years; none has become degenerate. Some men are naturally more susceptible to alcohol than others; these, because they are more tempted, drink to greater excess and so are weeded out. As a consequence, every race possessed of abundant supplies of alcohol is temperate in proportion to its past experience of the poison. The inhabitants of the wine countries of Europe are very temperate; the inhabitants of northern Europe are much less temperate. Savages, who have had little or no experience of alcohol, are the most intemperate of all when afforded the opportunity. Nearly the same thing is true of opium. The natives of India who have longest used opium are now least harmed by it and are temperate in its use. The Chinese are less temperate. The Burmans and Polynesians, to whom it has only lately been introduced, are extremely intemperate in its use.

In a word, Dr. Reid ascribes racial improvement generally to the same protective mechanism as that through which immunity to disease comes. The body learns to resist, and only such individuals as are capable of resistance survive to be the procreators of a race that will have in itself the perpetuated elements of such resistance. Dr. Reid's paper is discussed in the same issue of the *Independent* by two prominent American authori-

1. New York Independent, Feb. 15, 1906.

ties, Professor Franklin H. Giddings, of the department of sociology of Columbia University, and H. W. Conn, professor of biology in Wesleyan University, who both agree that the influence of environment on the race has been very much overrated, and that natural selection and the elimination of the unfit are undoubtedly the saving factors in present-day human evolution. The consideration of such opinions should open up new lines of thought to physicians who are apt to cling to the idea that racial degeneration is a question of unsuitable environment rather than of the preservation of the unfit to such a degree that degenerative factors are not eliminated, as they would be in the ordinary process of human nature.

THE ETIOLOGY OF HEMOPHILIA.

Since hemophilia, superficially at least, seems to depend on some alteration in the coagulability of the blood, it is frequently regarded as an example of the hereditary transmission of a chemical peculiarity. The exact cause of this peculiar tendency to prolonged bleeding from insignificant or perhaps imperceptible wounds has been sought vigorously by both histologic and chemical means, but as yet without avail. Various observers have described abnormal thinness, or increased cellularity, or fatty degeneration of the vessel walls, but the findings have been far too inconstant to afford a satisfactory anatomic explanation of all the features of hemophilia. Likewise, increased blood pressure can be ruled out, for, although the left heart is frequently enlarged, usually no increased pressure is demonstrable; furthermore, conditions of high blood pressure, such as nephritis, do not cause hemophilia. The theory of "hydremic plethora" is also without good foundation.

The most natural place to look for the fundamental fault is in the blood, but speaking strongly against this is the frequent occurrence of "local" hemophilia, e. g., in some hemophilics wounds of the skin may behave as in normal individuals, whereas any injury of the mucous surfaces is followed by pronounced hemophilic bleeding[1]; in other cases the hemophilic bleeding is limited to regions above the shoulders; in still another class the bleeding is always from one organ, e. g., the kidneys. Nevertheless a great deal of investigation of the blood has been done, chiefly with negative results. There are no characteristic changes in the cellular elements of the blood, beyond those common to all secondary anemias, except, possibly, Sahli's observation of a decrease in the number of white corpuscles, with a relative increase in the number of lymphocytes. No constant alterations in the salts of the blood have been found; and the proportion of water, the alkalinity and the osmotic pressure of the serum all seem to be normal. Since bleeding is normally stopped principally by coagulation, a deficiency in fibrin or its antecedents might be expected, but most studies on this point have shown a normal amount of fibrin in the blood of hemophilics, the frequent formation of large tumors of clotted blood at the bleeding points supporting the experimental evidence that the blood contains an abundance of fibrinogen.

As to the rate of clotting, the results obtained by different observers are by no means in accord, which seems to be explained by the recent studies of Sahli,[2] who has avoided a number of errors made in earlier investigations. He found that in the intervals between the attacks of hemorrhage the rate of the coagulation of the blood is constantly much slower than normal. During an attack of bleeding the coagulation time approaches the normal; indeed, it may be quicker than normal; apparently this is due to a reaction on the part of the organism to the loss of blood. If blood be collected directly from the site of bleeding, the coagulation time is very rapid, because of the accumulation of fibrin ferment from the clot over which the escaping blood flows. Yet, in spite of the normal coagulability of the blood, and the rapid clotting after the blood escapes from the vessel, bleeding continues for long periods before it can be stopped. As there is no general change in the properties of the blood to account for the bleeding, and as local influences seem to be important in hemophilia, Sahli advances the plausible hypothesis that chemical changes in the vessels must be the essential factor in hemophilia. Hemorrhage is ordinarily checked chiefly by the formation of clots that plug up the bleeding vessels at the point of the hemorrhage. The local formation of the clot is believed to be due to liberation of fibrin ferment (or its antecedents) by the injured cells of the vessel wall at the point of the vascular lesion. If the cells of the vessel wall are deficient in these fibrin-forming substances the blood will not clot in the mouths of the vessels, but will first clot when it reaches a place where fibrin-forming substances are furnished by other tissues, or, as is generally the case, when the leucocytes are broken up by exposure to the air or other injurious influences. Under these conditions the blood may clot in large masses, but, as there is no fibrin adhering to the vessel walls at the bleeding openings, blood continues to escape.

Sahli considers, therefore, that the cause of hemophilia lies in hereditary deficiency of fibrin-forming substances (thrombokinase or zymoplastic substances) in the vessel walls, so that when the vessels are injured there is no local production of fibrin such as occurs normally. Local hemophilia may be explained readily as a local deficiency in fibrinoplastic material. In general hemophilia even the leucocytes may exhibit the same defect, in which case clotting of the blood is diminished even outside the tissues. This hypothesis seems to be in excellent agreement with the facts now known, but it yet remains to demonstrate such a lack of fibrin-forming elements in the vessel walls and other tissues of a hemophilic subject. It probably also explains why the marked

1. Abderhalden: Ziegler's Beit., 1904, vol. 35, p. 213.

2. Zeitft. f. klin. Med., 1905, vol. lvi, p. 264. See also THE JOURNAL, xliv, page 1817.

increase in coagulability of the blood that can be obtained by administration of calcium salts is, as Wright's[3] observations show, not sufficient alone to stop hemophilic bleeding, even although the rapidity of clotting is much greater than normal. As Sahli suggests, whatever means are employed to check such bleeding, should aim to secure a stoppage of the mouths of the vessels by the clotting blood; this may be best attained probably by applying the styptics under considerable pressure.

THE RESPONSIBILITY OF THE MEDICAL SCHOOL FOR CONTRACT PRACTICE AND OTHER EVILS.

We have often referred to contract practice and its causes, and we have included in the latter the overcrowding in the profession, the jealous rivalry and the disorganized condition that permits men to isolate themselves and to minister to the immediate present at the expense of the unthought-of future. Perhaps we have never dwelt with sufficient emphasis on the part which the medical college plays in failing to lay a foundation in the physician's training that will tend to prevent secret division of fees, contract practice, jealousy, slander and various other unethical practices.

One of the ways in which most, if not all, of our medical schools have failed to do their duty has been in graduating students into professional life without having given them the slightest idea of the economics of medicine. No word of those principles of ethics which should govern the conduct of medical men has been taught them. Medical students have had no instruction on what should be their relations to their fellow-physicians and to the profession in general or to the people whom they are to serve. Thus, ignorant of what they should know, they step into professional life and at once begin to make blunders. Who of us can truthfully say that, during the earlier years of his professional life, he did not do many things which were not in accord with that spirit of honor which should have guided him, and this solely because he knew no better? Not only have the colleges failed to teach the student what should be his future attitude toward his professional brethren, what he should do and what he should leave undone, but they have also failed to instill into the student's mind that spirit of "Unity, Peace and Concord" which he most needs.

Indeed, so far from teaching this, our schools have too often placed before the student, throughout his entire course, living, breathing examples of "envy, hatred, malice and all uncharitableness." Who of us can not recall the bitter rivalry, the unseemly fights and squabbles between the members of the faculties of his own school and some other, or between those who were members of the faculty and those who would like to have been?

Having been graduated in ignorance, the physician has begun his lifework in the greatest of all liberal professions, heavily handicapped. The seeds of discontent, of jealousy, of discord, have been sown during his undergraduate years, and they are not healthy seeds to plant in isolated soil. Until very recently, and in large measure even now in many sections of the country, he has found himself a solitary member of an unorganized profession; he has gone his own way and been subject to the evils that accompany a solitary life. His professional neighbors, without knowing him or his ability, have not welcomed him to their ranks. There has been no society of medical men where he might meet his professional brethren and thus counteract the individual peculiarities which develop in all of us. He has been slandered, and, in turn, has quite as unjustly slandered his fellow-practitioners while the people have looked on and their respect for the profession suffered. Whole communities have been disturbed for years, and children have been born, have grown up and gone into the world, carrying a feeling of contempt for the medical profession, simply because a few otherwise good physicians and excellent men could not dwell together in charity. And probably the foundation for most of these life-long, bitter fights among medical men has been a falsehood.

Much—not all, of course—of this could have been avoided had the young physician been warned in time.

THE EXPERIMENTAL PRODUCTION OF ARTERIOSCLEROSIS.

The study of disease in the human being is always rendered difficult by the fact that the pathologic investigations, for the most part, must be limited to the terminal stages of the disease. Such studies, while they doubtless advance our knowledge to a large extent, throw little light on a very essential aspect of the subject, the evolution of the disease. In man we must depend for our studies of the early stages of most chronic diseases on the chance finding of early lesions in subjects dead of other conditions. Even here the pathologic conditions may be so various that their inter-relations are difficult of interpretation, and we are finally reduced to the experimental method if we are to follow a given disease, uncomplicated, throughout its course.

Arteriosclerosis is a disease so common and so varied in its effects that it has always been subjected to close study and numerous attempts have been made to produce it experimentally. Up to within three years such attempts have been uniformly unsuccessful. In 1903, however, Josué described lesions in the aorta of rabbits, similar to those found in man, and due to the administration of the active principle of the adrenal glands. His report has since been confirmed by various observers, recently by Pearce,[1] and the original observations have been considerably extended. The lesions of experimen-

3. Wright: Brit. Med. Jour., 1894, vol. 2, p. 57.

1. Jour. of Exp. Med., 1906, vol. viii, p. 74.

tal arteriosclerosis in the rabbit, and this seems to be the animal *par excellence* for its experimental production, are remarkably like those which occur in man under natural circumstances. The disease differs in some respects from human arteriosclerosis. It is confined to the aorta, according to Pearce and most observers, though it may attack other vessels, according to Erb. The acuity with which the lesions appear (they are often well marked after two months) would also seem to be different from the usual course of human arteriosclerosis. To the naked eye, the animal and the human disease are practically identical. The vessels of the rabbit show, first of all, an irregular longitudinal streaking of the intima, later irregular, discrete or confluent areas of a pearly gray color, and almost constantly calcified, later still dilatations, even aneurisms, with more marked calcification, appear. It can readily be seen that just such a description also fits the lesions of human arteriosclerosis.

The greatest interest of these experimental arterial lesions lies in the histologic findings. Pearce's work especially shows that the earliest lesions are in the media and affect the muscular tissue and the elastica. The lesions are degenerative in character, partake of the nature of a necrosis, and are followed by the deposition into the necrotic tissue of lime salts. Fracture of the elastic fibers, which is quite commonly seen, occurs least where the deposition of lime salts is greatest, and is seen to the largest extent in connection with aneurismal dilatations where but little calcification has occurred. The proliferative changes in the intima which occur during the later stages of the process seem, according to Pearce, to partake very definitely of the nature of a compensatory process.

The method by which adrenalin acts in producing these changes is still obscure. That the action is due to the direct effect of toxins on the media seems unlikely from its limitation to the aorta. That it is due to the action on the vasa vasorum, as Erb holds, seems doubtful in the presence of changes in the adventitia. The most striking change produced by adrenalin is the increased blood pressure, and some, at least, of the changes observed might be due to this. As Pearce points out, this aspect of the question must be settled by methods other than histologic.

So far as applying the results of these experimental studies to man is concerned, most of the investigators have taken a conservative stand. At present, pathologists are pretty well divided as to the pathogenesis of arteriosclerosis. There are many who hold that the disease is essentially an inflammatory one and that the intimal changes are not secondary to the medial ones; on the other hand, many still support Thoma's view that the first changes are degenerative ones in the media, and that the intimal changes are of a compensatory nature. The experimental work seems to give support to the latter view.

PHYSICIANS AND POLITICS.

It has long been regarded as a kind of unwritten law by physicians that they should take no part in politics. Perhaps, however, this is scarcely the correct way in which to describe the situation. Rather might it be said that physicians, as a body, have shown themselves apathetic in regard to politics, preferring to stand aloof from party strife and to look on the whole question as one in which they had slight concern.

This attitude of indifference has been rudely shaken of late years, and the fact is being borne in gradually on medical men that, in order to protect their own interests and the interests of the general public, they must abandon this lethargic position and act both aggressively and defensively. There are many reasons why the physician should not eschew politics; indeed, there are more reasons in favor of the physician playing his part in the political world. The somewhat cynical indifference assumed by the medical profession toward politics has resulted in the passage of many measures in several states inimical to physicians and by no means advantageous to the community at large. Signs are not lacking that a change of front is about to be manifested by medical men, and that in the not far distant future the doctor must be reckoned with as a power in politics. This is as it should be. It is not urged that the physician should inject himself into the hurly-burly of political warfare, but that he should use his influence to forward such measures as would be conducive to the betterment of sanitary conditions and to oppose measures calculated to be detrimental to the public health.

If the medical man wishes, he can exert an immense amount of influence. He is, in a general way, educated, well read, a good judge of human nature, and, above all, is in closer touch with all sections of the community than are the members of any other class. It goes without saying that, as regards matters that come within his particular province, he is entitled to speak with authority. It has also been suggested that by the participation of medical men in politics the tone would be raised. At any rate, municipalities and governments would often do well if they asked for and acted on expert medical opinion ere embarking on many of their wide-reaching schemes. As it is, the fact stares us in the face that the aid given by the government to medical or sanitary measures has been meager in the extreme. The medical man is a negligible quantity in the affairs of the nation or state, and until he has shown that he is an important member of the community politically he will, as before, be treated with contemptuous indifference. The upshot rests with himself to a very large extent.

THE PREVENTION OF BLINDNESS.

If it be true, as stated, that 33 per cent. of blindness is certainly avoidable, it becomes pertinent to consider whether the profession can not do more, both in the care of eye affections and in the education of the public.

In a small proportion of cases, blindness is caused during infancy, but in the majority it must be attributed to the more dangerous, and especially to the contagious, eye affections, concerning which the public is too little informed. There is no disability that is in its way more discouraging to the individual or more costly to the public than blindness, and, while it is possible to render it less of a public and private burden, very much still remains to be done. The evil is none the less serious because a considerable portion of the burden is borne by private resources instead of public charity, as is the case with insanity. The fact that the blind are not so much a public danger does not render them less deserving of public sympathy or make it less our duty to ease and especially to prevent the occurrence of their infirmity. Much can be done by the promotion of proper legislation, as in the state of Massachusetts, and still more by an increased sense of responsibility and conduct in accordance throughout the medical profession. We are doubtless doing much both personally and in the education of the public, but the existence of so much preventable blindness means that we could do more.

PHYSICIANS DO NOT APPROVE OF CHLOROFORMING THE HELPLESS.

The astonishing allegation has been quoted in a number of newspapers recently that two medical societies had indorsed the proposal to chloroform all persons who had reached the age of sixty. All sensible physicians knew this could not be true of any reputable society, and we at once wrote for information. The secretary of one of the societies says it was all the result of a joke on a reporter, who accepted as truth the fabric of lies and embroidered on it to a considerable extent in his paper. We hope that the affair has not contributed to the public's distrust of the physician. We had supposed that the unenjoyable notoriety thrust by a dull-brained press on the originator of the chloroforming-the-aged joke would be a solemn warning to all other physicians to avoid the subject. If one insists on joking, let both joke and listener be approved by a state board of examiners in humor.

THE POSTOFFICE DEPARTMENT AND MEDICAL LEGISLATION.

The influence of the Postoffice Department in regulating, if not actually controlling, the sale of spurious drugs and medicines and appliances for criminal purposes is of the highest importance. It is a source of congratulation that the present Postmaster-General, Mr. Cortelyou, is fully alive to this fact, as is shown by his letter published in the Department of Medical Legislation. The thanks of the medical profession and society in general are due to the Postoffice Department for having suppressed many concerns that have been engaged in this nefarious traffic. It is a matter of sincere regret, however, that the present law does not enable the department to deal summarily with many of these offenders. Congress should so amend existing legislation that it shall be an offense to deposit in the mails matter advertising either remedies, appliances or treatment intended for fraudulent or criminal purposes and authorizing the confiscation of the same when found in the mails. The assumption of the Postmaster-General that such a law would have a most wholesome moral effect will be ratified by every reader, who will likewise agree in the view that society in general is entitled to precisely this sort of protection.

CANADIAN COURT TO INVESTIGATE A NOSTRUM.

An opportunity is now afforded in British Columbia to secure some light on the alleged harmlessness of "Chamberlain's Colic, Cholera and Diarrhea Remedy." We referred last week to the coroner's verdict on the death of an infant said to have been caused by this nostrum. The Vancouver *World* used some strong language in commenting on the case, and that paper is now sued for libel. We are glad to note that the *World* declares its satisfaction over the prospect. Some of these nostrums are being hard pressed by the exposures that are made, and they will, of course, fight back. Whether they will carry the fight actually into the courts remains to be seen; it is easy to commence a suit, and it has the effect of scaring the weak-kneed. But sometimes the courts get to bottom facts and find out the truth which some nostrum vendors are not anxious to have made known.

ONE ILLUSTRATION OF FRATERNITY AND CO-OPERATION.

An Idaho physician[1] who made application for license to practice was rejected because the results of his examination were not satisfactory, and the district judge to whom his appeal was taken reviewed his examination papers, raising the grade, but not raising it enough to pass him. He then appealed to the Supreme Court, and, while the case was pending, Dr. R. L. Nourse, the president of the Idaho State Medical Society, who was also a member of the State Board of Medical Examiners at the time the application referred to was acted on, commented rather pointedly, in his annual address, on the actions and words of this district judge. Besides quoting freely from the judge's opinion as handed down, Dr. Nourse said: "Think of it! A judge, however learned he may be in matters of law, sitting as superior to a board of six medical men on matters pertaining to medicine, gravely scrutinizing the markings given by a medical board to a candidate for a license to practice medicine, to see if he had been rated correctly. It would be intensely funny if it were not, in fact, so serious a matter." Further, commenting on the remarks of the judge concerning the subject of pathology, Dr. Nourse said: "It will, no doubt, be news to you that pathology is a subject that only specialists (he does not say what specialists) are expected to be posted on. Although every *bona fide* medical school in existence teaches pathology, and every state examining board must examine on it, yet this learned judge sweeps it aside as an unfair test." For these remarks Dr. Nourse was summoned before the judge, who fined him $300.00

1. See Idaho news, this issue.

and costs for contempt of court. An appeal was taken to the Supreme Court, but it refused to set aside the action of the district judge and the fine was paid. Dr. Nourse's public criticism of the judge while the case was yet unfinished may have been technically wrong, but it was worth the fine to have the opportunity of expressing the frank opinion. The best part of the whole matter, however, is that the members of the Idaho State Medical Society showed their fraternal feelings in a practical manner by voluntarily taking such action that Dr. Nourse will be nearly, if not fully, repaid. They have sent to the secretary $240.00, and more is still coming in. It is this spirit, which is the natural result of organization, that is so encouraging for the future, for it is a spirit that is gradually coming to prevail among the members of the profession in every state.

CONTAMINATED FOOD.

The work of securing pure food involves more than making laws against adulteration. Food which is not adulterated may yet be contaminated in its manufacture and preparation for market. In a recent article Mary Sherman,[1] of the National Consumers' League, portrays some conditions that almost make one afraid to eat. The article is illustrated and shows in what vile and disgusting quarters macaroni, ice cream, candy and other products are prepared. For the most part, these supplies are for consumption among the poorer classes, and the personal danger is not very apparent to the average person outside of the slums; but this can not be said of a New York nut factory, in which nuts are shelled for candy factories, bakeries and retail groceries. The firm makes a specialty of "health food" preparations, including nut marmalade, nut butter and nuts packed in glass jars. These products are sold in the best shops and are purchased by well-to-do people. The workers are described as being, without exception, dirty. Their hands were filthy. One girl, who separated the unbroken shelled nuts with her fingers, had ulcers on the backs of her hands. During the rush season the workers, who are largely Italians on poor wages, take work home. Some of these homes are said to be indescribably filthy and crowded. In one case, nuts were picked over by an Italian and his children. The father and one boy were tuberculous. The father had tuberculous joints, and during the time that he was engaged in this work he had had a knee-cap and part of the arm bones removed. The nut meats picked over in such houses by such persons lie on their tables over night and, on being returned to the factory, are not washed or cleaned, but are packed into jars to be sold at 25 cents each, with advertisements calling attention to the purity and cleanliness of the goods. These specific instances are simply cited to indicate the need of health inspection of the tenements; the pure-food agitation involves an immense amount of work and demands the sympathy of people in every walk of life, for self-protection as well as for the protection of those who have to buy cheap foods.

1. Charities and the Commons, February 10.

THE DIAGNOSIS OF INCIPIENT TUBERCULOSIS.

There is no subject which so imperatively requires the attention of the general practitioner as the diagnosis of incipient tuberculosis. It is generally admitted today that, if the symptomatology be recognized early enough, the sufferer in most cases can be restored to health. Yet the pathetic fact remains that the disease is generally not recognized until it has passed the incipient stage. The committee on nomenclature of the National Association for the Study and Prevention of Tuberculosis has provided this definition of incipiency: "Slight initial lesion in the form of infiltration limited to the apex or to a small part of one lobe; no tuberculous complications; slight or no constitutional symptoms (particularly including gastric or intestinal disturbances or rapid loss of weight); slight or no elevation of temperature or acceleration of pulse at any time during the twenty-four hours, especially after rest; expectoration usually small in amount or absent; tubercle bacilli may be present or absent." Since most patients first consult the family physician, he ought to be a specialist in tuberculosis, and if a practitioner who assumes the important rôle of family physician does not feel proficient he should realize his responsibility and take steps to render himself thoroughly familiar with the symptomatology, diagnosis and treatment of this disease. In few other diseases will good and timely action bear so much beneficent fruit. In no other disease will the mournful results of unskillfulness and conscienceless neglect be visited so disastrously on the physician. It is not intended to set forth here the many factors to be considered. We would but emphasize the fact that conclusions must be reached only after the consideration of many details.[1] One among these would mean nothing; several taken together would be suggestive; a number combined would be conclusive. There is no telling to what a slight hint may lead. The faculty of judgment, of basing correct conclusions after having grasped essential features, the discriminative temperament, the scent for diagnosis, must here be called into play; and when it exists the physician can and will, without doubt, diagnose most cases of tuberculosis while the disease is in its incipiency.

Medical News

IDAHO.

New Hospitals.—Articles have been filed for the incorporation of the Pocatello General Hospital with a capitalization of $25,000, of which $5,000 has already been subscribed.——Coeur d'Alene Hospital has been reorganized and incorporated by Drs. B. J. Scallon and W. W. Wood of Coeur d'Alene, and Drs. I. L. McGee and C. W. Craik, Wallace.——The Idaho Falls Hospital Association has been incorporated with a capital stock of $20,000.

State Board of Examiners Has Quasi Judicial Powers.—A very important decision was recently handed down by the Supreme Court of Idaho bearing on the judicial powers of the State Board of Medical Examiners. Dr. Raaf took the examination for license to practice at the regular meeting of the

1. Report of the Committee on Early Diagnosis of the National Association for the Study and Prevention of Tuberculosis. THE JOURNAL A. M. A., May 27 and June 3, 1905, pages 1706 and 1804. See also: "The Early Diagnosis of Incipient Tuberculosis," a circular issued by the Illinois State Board of Health, which can be obtained, we believe, by addressing Dr. James A. Egan, Springfield, Ill.

board in October, 1904, but failed, securing a general average of only about 56. Appeal was taken by him to the District Court, on a writ of review, and the judge was asked to re-rate the examination papers, which the judge did, and as a result raised the doctor's grade from 56+ to 69. And further, the judge in his findings says: "But I find patnology to be a subject that only specialists are expected to be conversant with, and I therefore set aside the subject of pathology entirely, and on all the other branches I find the plaintiff entitled to 73.48." This, however, was not enough to pass the plaintiff (the law requires 75), and the judge refused to order the board to grant him a license to practice. From this decision the plaintiff appealed to the Supreme Court, and recently this court handed down a decision wherein the board was sustained in its contentions that the district judge exceed d his jurisdiction in presuming to review and remark the examination papers of applicant for license, and that appeal from the decision of the board of examiners as to an applicant's fitness to practice medicine could only be taken on points of law. In other words, the board of medical examiners is given quasi-judicial powers, and so long as its actions are within and according to law, its decision as to an applicant's qualifications to practice medicine is final and without appeal.

ILLINOIS.

Illegal Practitioner Fined.—Stephen Picard was found guilty February 16 of advertising himself as a licensed physician, and was fined $100 and costs.

State Charities Board Election.—The State Board of Charities met in the office of the secretary, at Springfield, February 13, and elected Dr. Frank Billings president.

Personal.—Dr. Francis E. North, Taylorville, was recently operated on for appendicitis in St. Louis.——Dr. Ezra Weis, Peoria, is critically ill with cerebral hemorrhage.

Dedicate New Building.—The Illinois Western Hospital for the Insane, Watertown, dedicated its new amusement hall and two cottages for the treatment of insane consumptives, February 12.

New Hospital for Consumptives.—The building committee of the Cook County Board has approved the plan for the proposed emergency hospital for consumptives on the County Hospital ground, to cost $15,000.

Civil Service Examination for Internes.—The Civil Service Commission announced the following appointments for members of the examining board to conduct the examinations for internes for Cook County Hospital, March 6 to 10: Drs. Fernand Henrotin, Charles S. Bacon, J. B. Colwell, Malcolm L. Harris, Charles E. Kahlke, John D. Robertson and Robert B. Preble.

Dr. McCormack's Visit.—Dr. H. C. Mitchell, president of the Illinois State Medical Society, announces that Dr. J. N. McCormack will devote the entire month of April to Illinois. He will begin his itinerary in the ninth judicial council district, which is located in the extreme southern end of the state, and will take the districts according to their geographical arrangement, going from south to north. In the work of medical organization, says Dr. Mitchell, Dr. McCormack has no superior in the United States. The work he is doing is of the highest order and includes not only the medical profession, but the laity as well. There is a great demand for this kind of work throughout the entire country, because it brings the profession into closer and more harmonious relations, and teaches the physician his duty to his patient, and the patient his duty to his physician. Dr. McCormack invites the general public to all these meetings, and wants all classes of thinking people, such as lawyers, doctors, ministers, farmers, laborers, women's clubs, temperance organizations, county officials, congressmen, legislators and United States senators. Dr. McCormack says that often after he has delivered his lecture the physicians in attendance will say that it is too bad that the general public could not have been invited, as it would have been just as instructive to them. Dr. Mitchell, therefore, hopes that this mistake will not be made this time, as Dr. McCormack will only visit Illinois once, and, if the general public is not invited, it will be too late to rectify the mistake.

Chicago.

A Low Death Rate.—For the week ended February 17, 527 deaths were reported, equivalent to an annual death rate of 13.41 per 1,000, which compares favorably with the rate of 14.34 for the previous week and with 16.50 for the corresponding week of 1905. Pneumonia led death causes with 80, followed by consumption with 72, heart diseases with 49, violence with 37, Bright's disease with 29, acute intestinal diseases with 29, nervous diseases with 26, and cancer with 23.

Practical Disinfection.—The State Board of Health has issued a circular detailing the experimental work in formaldehyd disinfection done in its laboratory. As a result the board now feels justified in recommending formaldehyd for use in disinfection after contagious diseases, if employed by the methods described, with potassium permanganate and with 40 per cent. aqueous solution of formaldehyd, and believes that in properly sealed rooms positive and reliable disinfections can be secured by the use of 3½ ounces of potassium permanganate and one pint of formaldehyd solution to each 1,000 cubic feet of air space.

Di to Dr. Doherty.—Seventy-five members of the Chicago Medical Society attended a dinner in honor of Dr. David J. Doherty, February 17, at which Dr. Charles S. Bacon presided as toastmaster, and addresses were made by Drs. Senn, Evans and Corwin, eulogizing the thorough, able and conservative work of Dr. Doherty as a trustee and as a member of the society, and wishing him success in his trip to the Philippine Islands. Dr. Doherty responded, giving details of his plans of completing the dictionary of the Philippine dialects and stating that he expected to spend a year or two in sociologic and ethnologic studies before returning. A beautifully bound book, containing an address signed by all those present, was presented to Dr. Doherty.

MARYLAND.

To Prepare for Centenary.—A meeting of the alumni of the University of Maryland was held February 21 to prepare for the celebration in May, 1907, of the one hundredth anniversary of the medical department.

Personal.—Dr. Louis A. Griffith, Upper Marlboro, has been appointed a member of the State Board of Health.——Dr. Robert S. Tyson, Frederick, has been appointed physician to Montvue Hospital, Frederick County.——Dr. William B. Morrison, Hagerstown, has been appointed physician to Bellevue Asylum.

For State Sanatorium.—A bill has been introduced into the legislature appropriating $25,000 for a state sanatorium for consumptives in the Blue Ridge Mountains. This sum will be devoted principally to the purchase of land, and the institution will be operated in conjunction with the hospital for consumptives in the suburbs of Baltimore.

Hospital Report.—The seventh annual report of the Cambridge Hospital shows that during 1905 777 patients were treated, with 24 deaths. The receipts and expenditures were each about $12,550, leaving a small balance in bank. A special gift of $800 was received for the purchase of a set of sterilizers and through private subscriptions an *x*-ray department, a bacteriologic laboratory and an operating room were equipped.

Lectures on Milk.—The State Board of Health inaugurated a course of lectures on milk February 20, to continue every Tuesday evening until May 1. The lectures are delivered in McCoy's Hall, Johns Hopkins University, and include the economic, dietetic and hygienic relations of milk, and will mark the progress of an exhaustive investigation covering the production, transportation, reservation, distribution, domestic care, dietetic uses, adulteration, sophistication, epidemiology and governmental control of milk and milk products of the country. The lectures will be followed by an exhibition under the auspices of the State Board of Health, the State Live Stock Sanitary Board, the Agricultural College of Experiment Station, and the Association for the Prevention and Relief of Tuberculosis.

Baltimore.

Health Report.—The health department estimates that there are at present more than 10,000 cases of influenza. During the week ended February 17, 49 deaths from pneumonia and 4 cases of smallpox were reported.

Personal.—Dr. John Turner was presented with a solid silver wine tray by a number of physicians in New York, who have united for original anatomic research.——Dr. George Wegefarth has gone to St. Augustine, Fla.

The Sale of Patent Medicines.—Dr. G. Milton Linthicum addressed the Arundel Club, February 15, in behalf of the bill now before the legislature regulating the sale of patent medicines, and on February 17 a public meeting was held at Johns Hopkins University in the interest of the same bill, over which Dr. W. S. Thayer presided.

Hospital Report.—Johns Hopkins Hospital reports that for the year ended January 31 there were treated 3,027 whites and 1,197 colored patients; of these 3,350 were discharged as well or improved, 130 as unimproved, 292 were not treated, 134 were transferred to other departments, and 243 died. In the dispensary 71,435 were treated.

MASSACHUSETTS.

New Hospital Dedicated.—St. Anne's Hospital, Fall River, was dedicated with elaborate ceremonies February 4 by the Rt.-Rev. Bishop Stang. At present the institution can accommodate 87 patients.

Testimonial to Bowditch.—Over 400 patients who have been or are being treated at the Rutland Sanatorium presented recently to Dr. Vincent Y. Bowditch, who has been visiting physician there, a beautifully bound and illuminated testimonial in token of their regard for him.

Legacies.—By the will of Jasper P. Pope, Beverly, $1,000 is bequeathed to the Beverly Hospital.——By the will of Mrs. Helen G. Coburn the Children's Hospital, Boston, receives $50,000 and the Coburn fund of the Massachusetts General Hospital $75,000.——Harvard College will receive a legacy of $50,000 for its medical epartment under the will of the late George S. Hyde, to be paid on the death of Elkin P. Hyde and Mrs. Annie M. Sargent, brother and sister of the testator.

The Association Meeting.—The meetings of the American Medical Association, June 5 to 8, in Boston, come the week before the regular annual meetings of the Massachusetts Medical Society. The committee of arrangements for the latter has, therefore, decided to omit the scientific papers usually read before the medical and surgical sections on Tuesday afternoon. The time will be devoted to hospital visitation. All the other sessions of the state society will be held as usual, including the Shattuck lecture, on Tuesday evening.

Personal.—Dr. William P. Lawler, Lowell, has been made a member of the local board of health.——Drs. Daniel S. Harkins and Francis X. Crawford have succeeded Dr. Alfred A. Wheeler as physicians for the Boston street department.——Dr. Mary T. Bissell, New York City, has been elected superintendent of the North Adams Hospital.——Dr. Joseph N. Boyer, Jr., has been appointed city physician of Springfield, vice Dr. Simon J. Russell.——Dr. Joseph C. Pothier has been appointed medical inspector; Dr. Frank E. Stetson, chairman; Dr. Manuel V. Sylvia, quarantine physician, and Dr. Charles F. Connor, bacteriologist of the new Bedford board of health.——Dr. Carl H. Eidam has been chosen as chairman of the Lawrence board of health.——Dr. George A. Fagan has been appointed chairman of the North Adams board of health.

Change in Harvard Faculty.—The newly issued catalogue of Harvard Medical School shows 141 names in the list of faculty and instructors, one to every two students. A good many changes are to be noted. Those who have died or resigned are: Edward S. Woods, professor of chemistry; Francis H. Davenport, assistant professor of gynecology; H. H. A. Beach, John W. Elliot and John C. Munro, lecturers in surgery; Charles F. Withington, instructor in medicine; James O. Jordan, assistant in materia medica; James G. Mumford, instructor in surgery; and Drs. Samuel S. Maxwell, William A. Brooks, Jr., Hibbert W. Hill, George B. Magrath, Robert L. Emerson, David H. Walker, Clarence W. Keene. New appointees or promotions are: Drs. Louis Nelson, John W. Bartol, Robert B. Grenough, Ralph S. Lillie, Alexander Quackenbos, Eugene A. Crockett, Harvey P. Towle, Frederick S. Burns, Elliott P. Joslin, Harry C. Low, Arthur M. Worthington, George L. Baker, Francis W. Palfrey, Walter A. Lecompte, E. deW. Wales, Henry A. Christian, Carl L. Alsberg, Horace Bismey, Walter R. Brinckerhoff, Frederick E. Lord, Lawrence J. Henderson, S. Burt Wolbach, George H. Wright. New Austin teaching fellows are: Dr. Fred. T. Murphy, Dr. William L. Holt, and Dr. Fred. W. Thyng.

Boston.

McLeod Guilty.—At a meeting of the board of trial of the Massachusetts Medical Society, held January 31, Dr. Percy D. McLeod was found guilty of unprofessional conduct. The penalty for this offense is expulsion from the society.

Staff Changes.—The following changes have been made in the visiting staff of the Boston City Hospital: Dr. Abner Post has resigned as senior visiting surgeon; Dr. Frank W. Draper as medicolegal pathologist, and Dr. Edward T. Twitchell as physician to the Convalescents' Home. Dr. Herbert L. Burrell has been promoted to senior visiting surgeon; Dr. George H. Monks to junior visiting surgeon; Dr. Fred B. Lund becomes first assistant visiting surgeon; Dr. Frederick J. Cotton, second assistant visiting surgeon, and Dr. David Cheever, third assistant visiting surgeon. Dr. William H. Roby, Jr., has been appointed medical registrar vice Dr. John N. Coolidge, resigned.

MICHIGAN.

New Hospital.—The new Sault Ste. Marie Hospital was formally opened February 1.

Fire in Hospital.—The interior of the Michigan Children's Home Hospital, St. Joseph, was damaged by fire and water February 2 to the extent of $2,500.

Change of Name.—Dr. Charles B. Nancrede, Ann Arbor, has had a petition granted by the judge of the Probate Court to change his name to Charles Beylard Guerar De Nancrede.

Medicine Sample Distributor Convicted.—In the case of the Detroit Board of Health against Andrew McIntyre, charged with distributing samples of medicine from house to house in violation of the ordinance, the defendant pleaded guilty and threw himself on the mercy of the court and was released on suspended sentence.

Birth Registration.—The total number of births reported to the Department of State during January was 4,032, equivalent to an annual birth rate of 18.4 per 1,000. The registration for the first month of the operation of the new law requiring immediate registration of births has been satisfactory, although several districts made no report for the month. The number reported for the month, however, exceeds that for January, 1905, under the old law, by 830.

Academy of Medicine Election.—At the annual meeting of the Academy of Medicine of Southwestern Michigan, Kalamazoo, January 23, the following officers were elected: Dr. Alvin H. Rockwell, Kalamazoo, president; Drs. Norris A. Williams, Bangor, and Orrin F. Burroughs, Plainwell, vice presidents; Dr. Walter B. Blayker, Kalamazoo, secretary and treasurer; Dr. Edward H. Van Deusen, Kalamazoo, librarian, and Drs. George D. Carnes, South Haven, and Orton H. Clark, Kalamazoo, directors.

January Mortality.—The total number of deaths during January was 2,968, equivalent to an annual death rate of 13.6 per 1,000, as compared with 12.4 for December. Of the deaths recorded 544 were infants under one year of age and 943 of individuals aged 65 years and over. Among the important causes of death were: Pneumonia, 288; tuberculosis, 233; accidents and violence, 150; cancer, 135; diphtheria, 63; typhoid fever, 46; diarrheal and diseases of infants, 44; influenza, 39; whooping cough, 27; measles, 19; and scarlet fever, 18.

Personal.—Dr. A. S. Kitchen, North Escanaba, has been appointed local surgeon for the Chicago, Milwaukee and St. Paul Railway.——Drs. John Van der Laan and Frank W. Garber, Muskegon, have resigned as trustees of the Hackley Hospital in that city.——Dr. Roger S. Morris, Ann Arbor, instructor in internal medicine and demonstrator of clinical medicine in the medical department of the university, has accepted an appointment in the Johns Hopkins Hospital, Baltimore.——Dr. and Mrs. R. Adlington Newman, Detroit, sailed for the Mediterranean January 26.

MINNESOTA.

New Hospitals.—The George B. Wright Memorial Hospital, Fergus Falls, was opened to the public January 1. It has accommodation for about twenty-five patients.——The German Lutherans of Mankato have decided to erect a hospital, to cost $50,000, and with accommodation at present for forty-five patients.——A site has been donated for the Norwegian Hospital, Minneapolis. The buildings are expected to cost about $100,000.——The St. Paul Commercial Club has decided to erect a public hospital in that city to cost $14,000.——Bethesda Hospital is to be erected in Crookston, as the $12,000 fund required has been subscribed.

Personal.—Dr. Justus Ohage and family, Minneapolis, sailed for Naples from New York, February 24.——Dr. Andrew J. Gilkinson, Osakis, has been appointed a member of the State Board of Health.——Dr. Julian A. Du Bois, Sauk Center, has been appointed a member of the board of managers of the School for Deaf and Blind, Faribault.——Dr. Frank Murphy, Caledonia, has been appointed physician of Houston County.——Dr. Otto C. Quitmire, Parker's Prairie, has been appointed local surgeon for the "Soo" System.——Dr. Charles W. More, Eveleth, has been reappointed a member of the State Board of Health.——Dr. Edmund W. Bayley, Sleepy Eye, has been ap-

pointed brigade surgeon, Minnesota National Guard, with rank of major.——Dr. J. V. Johnson has been appointed health commissioner of Eveleth.——Dr. and Mrs. Samuel D. Flagg, St. Paul, have gone to the Mediterranean.——Dr. Eduard Boeckman, St. Paul, has agone abroad.——Dr. Charles Freeman, St. Paul, has been elected secretary and treasurer of the Anglo-American Club of Berlin.——Dr. Christopher J. Woolway, St. Paul, has been appointed chief physician for the Delaware Mine in Keweenaw County.

NEW JERSEY.

Hospital Changes Name.—Bishop O'Connor and the trustees of the new Roman Catholic hospital, Orange, have decided to change its name from the Hospital of the Immaculate Conception to St. Mary's Hospital.

Recovers Damages.—The suit of Dr. Reginald S. Bennett, Asbury Park, to recover $20,000 damages from Adolph Busch, St. Louis, whose automobile ran down the physician and his wife and child in June last, was decided February 7, and a verdict of $1,292 was given the plaintiff.

Personal.—When Dr. Charles Brewer completed his duties as house physician in the New Jersey state prison, the officers of the prison presented a silver tea service to him. Dr. Brewer was house surgeon for fourteen years. He is succeeded by Dr. S. F. Stanger, formerly president of the board of prison inspectors.

Funds for Hospitals.—William T. Evans, the artist, has donated $20,000 to Mountainside Hospital, Montclair, for the erection of a home for nurses. Miss Margaret S. Jarvie has also made a donation of $5,000 to the institution.——Mrs. Everett Colby has sent $5,000 to the New Jersey Orthopedic Hospital and Dispensary, Orange.

Contagious Disease in Camden.—The secretary of the board of health reported the number of cases of contagious diseases for the past month to be 71. Of these reported only two were of typhoid fever. This demonstrates the value of Camden's water supply, there having been practically no cases of typhoid fever since the installation of the artesian wells in this city.

Personal.—Dr. J. Walter Stiles, Jr., assistant physician at the Essex County Hospital for the Insane, Newark, was operated on for appendicitis, January 31.——Dr. William F. Ridgeway has been appointed city physician of Atlantic City, vice Dr. Leon H. Armstrong.——Dr. Charles C. Phillips, Deerfield, who has been a practitioner for fifty-two years in that place, expects to move to Pitman Grove.——Dr. and Mrs. C. D. Martinetti, Orange, returned from Europe by the *Princess Irene* January 25.——Dr. Joseph B. Shaw, Trenton, was thrown from his automobile and seriously injured, January 25.

NEW YORK.

Appeal for Stony Wold.—In order that this institution may claim the conditional gift of $13,500, $1,926 must be secured by March 1. The directors have been successful in raising $17,575 and are making a great effort to get the balance required.

Work on State Hospitals.—The State Lunacy Commission has awarded contracts for work to be done on the state hospitals at Rochester, Poughkeepsie and Willard. At Rochester the north building of the hospital group is to be remodeled. At the Hudson River State Hospital a refrigerating apparatus is to be installed at a cost of $7,395. At Willard a contract was let for the construction of a new cold storage building to cost $10,131, and the installation of refrigerating machinery at a cost of $7,163.

State Board of Charities.—Some of the recommendations for legislation contained in the recent report of this body are: That the appropriations to the state institutions be subdivided in the appropriation bill so that fixed sums shall be appropriated for food supply and clothing apart from the appropriations for salaries and other fixed charges; that the Craig Colony for Epileptics be enlarged as rapidly as possible, that it may be able to take epileptics of all classes from alms houses and other places where they can not receive proper care.

Against Consumption Colony.—A bill has been introduced to prevent New York City from establishing a consumptive colony in Richmond for which appropriations have already been made. The bill seeks to make an amendment to the New York City charter giving local boards of improvement the power to recommend the establishment of penal institutions and hospitals within their districts, and further making provision that no such institution or hospital shall be established in any borough, if such local board, by vote of three-fourths of its members, disapproves.

State Health Report.—Dr. Eugene Porter reports that during the past year 1,554 deaths from typhoid fever occurred in the state, and that it was no exaggeration to say that almost every one was caused by infected water. The efforts of the health departments to prevent pollution of public waters should be supplemented by legislation which will give it further control of potable waters of the state by providing that all plans for public water supplies be approved by the state commissioner of health, and also to secure inspection of proposed and existing sewer systems. Not only was it important that all sewer systems in the different towns and municipalities in the state be investigated, comparison made and examinations conducted, but it was equally important that every sewer system, sewage disposal plant, manufacturing establishment, every municipality and summer resort should be thoroughly examined at least once a year and a competent report made in every case. The registration of births was far from satisfactory. The most incomplete registration was shown in Troy and Albany, where a birth rate of but 10.1 per 1,000 as against a resident death rate of 16.7 was recorded. In Troy the birth rate was 11.8 and the death rate 19.1. It was doubtful whether one-half of the births occuring in these cities were reported. The registration of marriages was also unsatisfactory. For this he recommended that a marriage license be required from the county clerk of the county in which the contracting parties resided. The following cities reported fewer births than deaths: Albany, Troy, Binghamton, Cohoes, Corning, Fulton, Hudson, Ithaca, Middletown, Newburgh, Oswego, Rensselaer, Rome and Watervliet. The vital statistics for the year showed 172,259 births, 137,816 deaths and 78,261 marriages as against 165,014 births, 141,363 deaths and 74,677 marriages in 1904. Based on the recent census population the birth rate is 21.3 per 1,000 and the death rate 17.

New York City.

Personal.—Dr. John N. Drury of Bellevue Hospital has gone to his home in Lowell, Mass., to undergo treatment for blood poisoning. It is feared that he will lose his arm.

Harvey Society Lecture.—The tenth lecture in the Harvey Society course will be delivered at the New York Academy of Medicine by Prof. Charles S. Minot, February 24, on "The Nature and Cause of Old Age."

Low Death Rate.—At the annual meeting of the trustees of the Hebrew Infant Asylum it was reported that the death rate of the institution for the past year was 1 per cent. It was thought that this was the lowest death rate in any children's institution in the United States.

Poor Food for Steerage Passengers.—The captain of the steamship *Erny* of the Austro-American Line has been arrested charged with providing unwholesome food for infants in the steerage. Several other captains of ships in the immigrant trade have also been arrested for failing to obey the statutes relating to accommodations for steerage passengers.

Contagious Diseases.—There were reported to the sanitary bureau for the week ended February 10, 1,390 cases of measles with 49 deaths; 432 cases of diphtheria with 49 deaths; 349 cases of tuberculosis with 161 deaths; 215 cases of scarlet fever with 16 deaths; 34 cases of typhoid fever with 7 deaths; 20 cases of cerebrospinal meningitis with 17 deaths, and 151 cases of varicella—a total of 2,591 cases with 299 deaths.

Out-Door Pneumonia Treatment.—Preparations are being made to remodel additional parts of the roof of the Presbyterian Hospital for the open-air treatment of pneumonia. This treatment has proved so successful that it is hoped the increased facilities will be available before the end of the winter. At present only children can be treated this way, as adults can not conveniently be carried on the roof and consequently receive treatment in small rooms with windows open.

Wood Alcohol in Communion Wine.—Health Commissioner Darlington told the alderman's committee on salaries and officers that the adulteration of the food and drink sold in this city had become so general that it had spread to communion wines, some of which are alcoholic. He had the contents of a bottle labelled "communion wine" analyzed and found wood alcohol, hard cider and anilin coloring matter. Dr. Darlington has planned a crusade against adulterated foods and drinks on a small scale. To make a complete job he thinks would cost the city $500,000 a year. He has asked for power to appoint a supervising chemist at $1,800 a year. When samples are found containing substances injurious to health he proposes to prosecute the makers and sellers. The committee decided to report favorably on Dr. Darlington's application.

NORTH CAROLINA.

Personal.—Dr. George A. Coggeshall, Henderson, is critically ill with pneumonia.——Dr. Isaac W. Faison, Charlotte, who has been seriously ill, is reported to be improving.——The vacancy in the office of coroner of Buncombe County, caused by the recent death of Coroner Dr. W. E. Hemphill of Arden, has been filled by the election of Dr. E. R. Morris of Asheville.

To Keep Water Pure.—Superior Court Judge Ferguson has made permanent the injunction recently obtained by the city of Durham against the Eno cotton mills near that city, restraining them from emptying their sewage into Eno Creek. The company is further ordered to provide a suitable system of sewage disposal at once, the method to be subject to the court's order, to the approval of the State Board of Health. The result is complete victory for the city of Durham and her efficient health officer, Dr. T. A. Mann.

Test Compulsory Vaccination.—The right of the state to enforce vaccination of school children is again to be tested in the courts of this state in a case now being developed in Union County. The county superintendent of health, Dr. H. D. Stewart, Monroe, went to the school house to vaccinate Mr. H. G. Griffin and his pupils, as there had been cases of smallpox in the vicinity and a general vaccination had been ordered. Principal Morgan declined to be vaccinated himself or to allow the children to be, alleging that their parents had forbid its being done. At the trial the teacher held that as the parents had forbidden the vaccination, had he permitted its being done he would have been personally and legally liable to them for damages, while the health officer contended that he should not have resisted the order of the health board. The final decision (which was reserved until March 10), rests on the rules adopted by the county board of health, the code of North Carolina saying it is a misdemeanor to violate the laws as passed by a county board of health, or to obstruct its operation, but it seems the code has been the subject of revision and a copy of the revised code, which went into effect only a few days ago, was not in court, hence the reserving of the decision.

OHIO.

Hospital Closed.—The Marion City and County Hospital was closed February 6.

Gifts for Hospital.—At the annual meeting of the trustees of Lakeside Hospital, Cleveland, gifts were announced aggregating $300,000.

Pay Ward Reopened.—The board of public service has decided to reopen the pay ward of the Cincinnati Hospital, holding, however, the right to close it again if the hospital should become so overcrowded as to necessitate its use for public cases.

Fires.—The residence of Dr. Leonard E. Warren, Marietta, was damaged to the extent of about $300 February 1 by an explosion of natural gas.——Longview Hospital was damaged to the extent of $1,000 by a fire which started in the superintendent's departments, February 10.

Cuspidors in Street Cars.—The State Board of Health has adopted a rule requiring companies owning and operating steam and electric cars not confined wholly within one municipal locality to provide cuspidors, and declaring it dangerous to public health to spit on the wall or floors of any such cars.

Distillers Object.—As was to be expected, considerable opposition has developed as a result of Health Officer Allen's recommendation to the Cincinnati health board to prohibit the sale of distillery slop to dairymen. If Dr. Allen's recommendation is adopted it will mean a loss of thousands of dollars a year to the breweries and distilleries, which, of course, is nothing to the owners of this otherwise unmarketable article, they claiming probably that it is an extremely useful article of diet for the milch cow.

Personal.—Dr. W. A. Dickey, Toledo, who was recently injured in a street-car accident, is convalescent.——Dr. Goodhue Kineon, Cincinnati, has been appointed assistant at the Ohio Hospital for Epileptics, Gallipolis.——Dr. Oscar W. Bonner has been reappointed health officer of Delaware.——Dr. Orlando T. Maynard, Elyria, sailed for England February 6. ——Dr. Frank C. Reed and family, Akron, left for a Mediterranean trip February 6.——Dr. Harry D. Belt, Kenton, has been reappointed physician of Hardin County.——Dr. James G. Shirera has been appointed surgeon of the B. & O. System at Newark.——Dr. Charles A. L. Reed, Cincinnati, has been chosen president of the Smoke Abatement League.——Dr. James A. Leech, Columbus, has been appointed physician at the workhouse.——Dr. Paul D. Hale, Dayton, is convalescent after a severe attack of pneumonia.

Non-Political Management of Hospital.—At the regular meeting of the Cincinnati Academy of Medicine, January 29, a resolution was adopted providing for a committee of five who were to devise some means by which it would be possible to take the department of health and the City Hospital out of the hands of the political party in power; in other words, to form a non-partisan board for the governing of these two important departments of the city service. As the law now stands these departments come under the management of the governing power of the city and can not be taken from them except by act of legislature. Theoretically, everyone is prepared to admit that it would be for the good of the city and for the best interests of the physicians if these two branches of city government were in charge of non-partisan boards, but whether the idea can be carried out at the present time is problematical.

PENNSYLVANIA.

Smallpox at Bryn Athyn.—Three cases of smallpox were reported in one home in Bryn Athyn during the past week. Dr. Fred Johnson, chief medical inspector of the state health board, has been detailed by the health commissioner, Dr. Dixon, to take charge of the situation. The village may be placed under state quarantine on account of the refusal of many of its residents to submit to vaccination.

Philadelphia.

Bequests.—The will of the late Araminta P. Banks bequeaths $25,000 each to the Home for Consumption, the Sunday Breakfast Association, and the Midnight Mission.

Health Report.—The deaths reported from all causes during the week numbered 612. This is an increase of 28 over last week, and an increase of 13 over the corresponding week of last year. The principal causes of death were: Typhoid fever, 37; measles, 14; diphtheria, 16; meningitis, 4; consumption, 81; cancer, 18; apoplexy, 14; heart disease, 55; acute respiratory diseases, 120; enteritis, 28; cirrhosis of liver, 10; Bright's disease, 45; old age, 14; accidents, 14, and marasmus, 4. There were 544 cases of contagious disease reported, with 59 deaths, as compared with 530 cases and 44 deaths reported in the preceding week. There were 429 new cases of typhoid fever, 725 of measles, 160 of pneumonia, 152 of tuberculosis, 78 of diphtheria, 51 of chickenpox, 37 of scarlet fever, and 4 of menenigitis.

WISCONSIN.

New Building for Hospital.—St. Mary's Hospital, Milwaukee, is to be torn down and a new building erected on its site to cost about $200,000.

Medicine Peddler Found Guilty.—On February 6 S. R. King, a medicine peddler of Beloit, was found guilty of practicing medicine without a license, and fined $50 and costs.

District Society Meeting.—At the meeting of the Eleventh District Medical Society, held recently in Ironwood, Dr. Matthew S. Hosmer, Ashland, was made president, and Dr. Charles D. Conkey, Superior, secretary-treasurer.

Personal.—Dr. George D. Ladd, Milwaukee, was stricken with cerebral hemorrhage while performing an operation at Milwaukee Hospital, January 20.——Dr. Thomas W. Nuzum, Brodhead, has gone to Europe.——Dr. Patrick H. McGovern, Milwaukee, has succeeded Dr. John R. Currens, Two Rivers, as a member of the State Board of Medical Examiners.——Dr. Henry J. Stalker, Kenosha, was taken seriously ill at a banquet in Racine, February 6.——Dr. Lawrence Mayer, Hudson, has been appointed a member of the State Board of Health.

Fox River Society Meeting.—The Fox River Valley Medical Society held its annual meeting and banquet at Green Bay, Wis., January 16. The following officers were elected for the ensuing year: President, Dr. Robert E. Minahan, Green Bay; vice-presidents, Drs. Walter R. Hicks, Menominee, Mich., and Henry W. Abraham, Appleton, Wis.; secretary and treasurer, Dr. Chester M. Echols, Appleton, Wis., and censor, Dr. William E. Fairfield, Green Bay, Wis. The secretary was instructed to thank *Collier's Weekly* in behalf of the society for its vigorous campaign against injurious nostrums.

Anniversary Meeting.—The Milwaukee Medical Society celebrated its twentieth anniversary by a banquet at the University Club, January 12. The toastmaster was Dr. Horace Manchester Brown. The regular toasts were responded to by Drs. Samuel W. French, W. H. Washburn, G. J. Kaumheimer, A. T. Holbrook and T. L. Harrington. The society has increased from eight to 150 members in twenty years; has a library, reading-room, pathologic museum and assembly-room on the third floor of the Goldsmith building; owns a library of 5,000 volumes, and subscribes to 100 periodicals annually. Meetings are held bimonthly and are well attended.

GENERAL.

Warren Essay Prize.—The Warren triennial prize was founded by the late Dr. J. Mason Warren in memory of his father, and his will provides that the accumulated interest of the fund shall be awarded every three years to the best dissertation (if any is considered worthy), on some subject in physiology, surgery or pathology; the arbitrators being the physicians and surgeons of the Massachusetts General Hospital. The prize for 1907 will be $500. Essays will be received until April 14, 1907. A high value will be placed n original work. Dr. Herbert B. Howard, resident physician, may be addressed for further particulars.

Army Medical Corps Examinations.—Preliminary examinations for appointment of assistant surgeons in the Army will be held on May 1 and July 31, 1906, at points to be hereafter designated. Full information concerning the examination can be procured on application to the Surgeon General, U. S. Army, Washington, D. C. The applicant must be a citizen of the United States, between 22 and 30 years of age, a graduate of a legally authorized medical school, of good moral character and habits, and with at least one year's hospital training or its equivalent in practice. Applications must be in possession of the surgeon general on or before April 1. There are at present twenty-five vacancies in the medical corps of the Army.

CANADA.

Tuberculosis in Toronto.—There were 271 deaths in Toronto from tuberculosis in 1905, a rate of 1.03 per thousand. During the year 39 patients were sent to the Gravenhurst sanitarium and 75 to the Toronto institution.

Fee Schedule for Life Insurance Examinations.—At the regular monthly session of the Medical Society of the County of Colchester, Nova Scotia, January 30, a resolution was carried unanimously, and signed and agreed to by all the medical practitioners in the county, making the minimum charge for medical examination for life insurance, including all fraternal societies, $5.

Toronto Will Disinfect All Houses After Consumption.—The local board of health of Toronto, at its meeting February 7, decided to instruct its medical health officer, that hereafter all houses and apartments which have been occupied by patients suffering from tuberculosis must be disinfected. As all death certificates go through the hands of the medical health officer, his inspectors will be instructed to perform this duty the same as in cases of diphtheria.

Ask Aid of Government to Entertain the British Medical Association.—Physicians of Toronto, representing the local branch of the British Medical Association, appeared February 7 before the premier and the provincial cabinet to ask for assistance in entertaining the association next August, $7,500 being the amount requested. The dominion government has partially promised $10,000, and the city of Toronto is expected to contribute $5,000, according to the newspapers.

Toronto Branch Victorian Order of Nurses.—The seventh annual meeting of the Toronto branch of the Victorian Order of Nurses was held February 14. The official report showed that during 1905 the nurses in connection with the institution cared for 522 patients, necessitating 6,842 visits, 500 being night visits. Two hundred and seventy-four physicians now employ nurses of the Victorian order. Of the 522 patients, 419 fully recovered, 45 improved, 15 sent to various hospitals and 14 died.

Ontario to Have Better Health Laws.—The Ontario medical health act is to be amended and consolidated at the present session of the Ontario legislature. The board of health has recommended the better enforcement of enactments regarding vaccination, the disinfection of railway cars, street cars and other vehicles, and that no municipality shall have power to adopt a water system unless sanctioned by the board of health of the province. More stringent legislation will also be sought relative to sewage disposal methods.

The Marriageable Age in Manitoba.—The Medical Society of Winnipeg, Man., at the regular meeting February 3, passed the following resolution unanimously with regard to child marriage: "The members of the Winnipeg Medico-Chirurgical Association are of the opinion that the marriageable age for females should not be less than 16 years, owing to physical immaturity before that age, and the almost certain procreation of weaklings in a large number of cases; and we believe child marriage from a scientific and humane standpoint to be a great evil to the individual and to the state."

Hospital News.—By the will of the late Mrs. Agnes Elizabeth King of Montreal the Montreal General Hospital receives a bequest of $100,000.——The trustees of the estate of the late Mr. George Gooderham of Toronto, who was for many years chairman of the board of trustees of the Toronto General Hospital, have contributed $25,000 to that institution.——Mr. D. D. Mann of Toronto and Winnipeg has donated $10,000 to the Toronto General Hospital.——There were 51 patients in residence in January at the Toronto Free Hospital for Consumptives, 38 of these being inmates on city orders from Toronto.——The old Vancouver (B. C.) General Hospital is likely to be used for housing the wards of the Children's Aid Society of that city.——The Vancouver (B. C.) hospital board is considering a memorial signed by 35 practitioners of that city, asking that staff appointments be made for five years. At present the staff consists of 12 physicians in ordinary attendance, 11 consultants and 2 ophthalmologists.——During the week ending February 10 the total number of patients treated in the Winnipeg General Hospital was 361, of whom 200 were men, 107 women and 54 children.——Fire caused $10,000 damage to the Rockwood Provincial Hospital at Kingston, Ont., on the night of February 9.——One hundred and ninety patients were received during 1905 into the Protestant Hospital for the Insane at Verdun, P. Q., 49 per cent. of whom were persons born outside of Canada. The total number in the institution at the end of 1905 was 654—343 men and 311 women.

FOREIGN.

Plague in Japan.—Dr. Moore, of the Public Health and Marine-Hospital Service, reports that the plague situation in Japan seems to be ameliorating, though the disease has not yet been entirely suppressed.

Orthopedic Congress in Germany.—The German Society for Orthopedic Surgery holds its fifth annual congress April 3, 1906, at Berlin. Adolf Lorenz of Vienna will preside. Dr. Joachimsthal, Berlin W. Magdeburgstrasse 36, is the secretary.

Roentgen Congress in Germany.—The German Roentgen Society announces its second annual congress April 1-2, 1906, at Berlin, preceding the German Surgical Congress. The general secretary is Dr. M. Immelmann, Berlin W. 35, Lutzowstrasse 72.

British Medical Association and Proprietary Preparations.—The *British Medical Journal* states that an advisory committee has been formed to assist the editor in deciding what proprietaries shall be noticed in the columns of the journal. The members on this committee are Drs. Cushny, Dunstan and Dawson Williams, and Mr. R. H. Kinsey. Dr. Dawson Williams is editor.

Plague in Persia.—It is reported that plague appeared in January in Seistan, on the border of Lake Nayzan, Persia. All precautions were immediately taken by the Persian authorities, acting in conjunction with the Russian and British consuls. A sanitary cordon was established, with a period of observation of five days, isolation of the sick, and preventive vaccination. There are European physicians in the epidemic area. At the time of the report, January 18, the disease had caused about 200 deaths.

Other Congresses in Germany in April.—The German Congress for Internal Medicine will be held at Munich, April 24-27, and the Congress for Experimental Psychology at Würzburg, April 18-21. Külpe of Würzburg is in charge of the arrangements for this latter congress, and will open the proceedings with an address on the "Present Status of Experimental Esthetics." Krüger will follow with an address on the "Relations Between Experimental Phonetics and Psychology"; Schumann on the "Psychology of Reading"; Sommer on "Psychiatry and Individual Psychology," and Weygandt on "Psychologic Examination of the Congenitally Mentally Defective."

Sanitation in City of Mexico.—The board of health of the City of Mexico has entered on its campaign against insanitary conditions. It will require householders to keep their premises clean and landlords to increase the supply of water in tenement houses. Bath houses will be built at all police stations and dirty members of the lower classes will be arrested on the streets and compelled to bathe. Persistent beggars will be banished from the city. The dirty clothing of the very poor will be burned and they will be provided with new raiment. The congested population in the tenements will be dispersed and inspectors of health boards will be invested with extraordinary powers. This sounds energetic.

The Anglo-American Medical Association.—The English-speaking physicians residing in Mexico have organized an asso-

ciation for scientific annual reunions. The first was held at Torreon, January 24-26, with Dr. D. Robinson in the chair. Dr. W. W. Ashurst of Chihuahua is chairman of the section for general medicine. Among the subjects discussed were tropical fevers, neuroses, practice of obstetrics in Mexico, mercury cyanid in treatment of syphilis, etc. The *Escuela de Medicina* for January 31 gives the program in full of each of the four sections. Scientific communications were presented by twenty-three different physicians. Our exchange deplores the avowed determination of the founders to restrict the addresses and discussions to English.

Yellow Fever in Bocas del Toro.—It is reported that Bocas del Toro, off the coast of Colombia, is a yellow fever center and that the Public Health and Marine-Hospital Service has been requested to take charge of the island and clean it out. The party of southern health officers who are making a tour of inspection of Central American fruit ports, state that the conditions at Bocas were so deplorable that every member of the party realized that unless something was done immediately Bocas would not be given the least consideration by the health authorities of the southern ports, and would prove such menace to the other Central American ports that it would interfere with the desire to preserve comparatively open communication with them. It is stated that there is no pretense of enforcing health regulations. A pernicious form of malaria is also prevalent. An examination of water tanks and barrels showed them to be swarming with the stegomyia.

Ramon y Cajal.—The Madrid Faculty of Medicine has recently published a list of the scientific works of Ramon y Cajal, its great histologist. Although only 54 years old, he has published 162 works, and has received the Fauvelle prize, the Helmholtz medal and the prize given by the International Medical Congress at Moscow, and has been invited to deliver the Croonian and other important lectures in foreign lands. He is also honorary member of two dozen scientific societies outside of Spain. The *Siglo Medico* of Madrid comments with amazement on what this great scientist has accomplished alone, without means and without aid, almost forgotten by the immediate circle around him until reminded of his existence by the honors heaped on him from foreign countries. His father was professor of anatomy at Saragossa, and his own first official position was the chair of anatomy at Valencia. His works have mostly been published in book form, or in the *Revista Trimestral Micrografica*. He visited this country in 1899 to lecture on invitation at Clark University.

Plague and Smallpox in India.—It is reported that the plague mortality in India is gradually rising. During the first week in January the United Provinces reported the greatest number of deaths, about 1,100; Bengal followed with 1,000. In Bombay presidency there were only 800 deaths; in the Punjab, 500; in the Central provinces, 200, and in Burmah about 100. Sixty-one deaths from smallpox were reported in Calcutta during the first week in January, and it is probable that many more cases existed, not including concealed cases. The epidemic began in Watgunge, Kidderpore, but probably on account of the work of the vaccination department, which made over 3,000 vaccinations in that district during December, the disease has been practically mastered, and the returns there are about normal. Other districts and wards have been attacked, and the present outlook is certainly grave. All the vaccine stations, fifteen in number, are doing their utmost to vaccinate and to induce guardians and parents to permit their children to be vaccinated.

International Medical Congress.—This congress at Lisbon bids fair to be one of unusual importance, although the number in attendance probably will be smaller than when it has been held in some of the larger capitals. Papers will be presented by some of the leading lights of the profession in Europe. The meetings will be held at the Medical School of Lisbon, which is a large building. Everything will be under one roof, and everyone will know where to find everything connected with the congress, as well as everything that is needed in a general way. There will be the office of the president, secretary and treasurer of the congress, telephone room, typewriting room, press room, information room, where one can find out all particulars regarding the various routes of travel; halls for showing different apparatus; amphitheaters for giving lantern exhibitions; a postoffice and telegraph office, registration room, money exchange, and a room where papers, cigars, cigarettes, etc., will be on sale. The opening exercises will be in the Geographical Society building, where a colonial exposition will take place during the meeting, under the auspices of the sections on colonial and naval medicine. Addresses will be delivered each afternoon at the general meeting by distinguished representatives of different countries. Sir Patrick Manson will represent England; Prof. E. von Bergman, Germany; Professor Reclus, Paris; Professor Neumann, Austria; Prof. Prince Jean Tarschanoff, Russia; Prof. Azevedo Sodré, Brazil; Dr. José Maria Esquerdo, Spain; Dr. P. Aaser, Norway. The names of those from other countries are not yet announced. Dr. Nicholas Senn of Chicago has been invited to deliver the oration for the United States. The amusements will include three large general fêtes, besides receptions and dinners. A large steamer will go from London and one from Hamburg, and these will serve as hotels during the stay there. One of the steamers can accommodate 300 passengers. The hotel and other accommodations are in the hands of Mr. Manuel José da Silva. Rédaction du Annuario Commercial de Portugal, Praça dos Restauradores, Palacio Foz, Lisbon, to whom all communications concerning board and lodging in Lisbon should be addressed. All communications regarding the scientific part of the congress should be addressed to Dr. Ramon Guiteras, secretary American National Committee, 75 West Fifty-fifth Street, New York. All questions regarding transportation to Lisbon and return should be addressed to Dr. Charles Wood Fassett, St. Joseph, Mo. Arrangements are to be made by him in a few days for hotel accommodations in Lisbon for his party.

Pharmacology

THE GREAT AMERICAN FRAUD.

The Fundamental Fakes.

The sixth of Mr. Adams' contributions in *Collier's Weekly*, February 17, contains little that is new, but it emphasizes several important facts which have contributed to the financial success of a number of well-known patent medicines. Foremost among these stands advertising, both in the lay newspapers and in medical journals. Mr. Adams says that advertising and testimonials are respectively the aggressive and defensive forces of the Great American Fraud. Without the columns of the newspapers and magazines, wherein to exploit themselves, a great majority of the patent medicines would peacefully and blessedly fade out of existence. He has found that the strongholds of the fraud are the dailies, great and small, the cheap weeklies, and the religious press. Mr. Adams says that in one respect some of the medical journals are far below the average of the newspapers, and on a par with the worst of the religious journals. They offer their reading space for sale, and he reproduces a letter from a well-known medical monthly making such an offer.

Mr. Adams is convinced of the gullibility of the American public as regards patent medicines. He speaks at length of the manner in which testimonials are obtained, often at great expense, from totally irresponsible persons. The geographical distribution of these indorsements is, he thinks, suggestive. Out of 100 specimens selected at random from the Pierce testimonial book, 87 are from small remote hamlets, whose very names are unfamiliar to the average man of intelligence. Only five are from cities of more than 50,000 innabitants.

Mr. Adams' closing paragraph is significant, and portrays things as they are. He says: "Our national quality of commercial shrewdness fails us when we go into the open market to purchase relief from suffering. The average American, when he sets out to buy a horse or a box of cigars, is a model of caution. Show him testimonials from any number of prominent citizens, and he would simply scoff. He will, perhaps, take the word of his life-long friend, or of the pastor of his church, but only after mature thought fortified by personal investigation. Now observe the same citizen, seeking to buy the most precious of all possessions, sound health. Anybody's word is good enough for him here. An admiral whose puerile vanity has betrayed him into a testimonial; an obliging and conscienceless senator; a grateful idiot from some remote hamlet; a renegade doctor, or a silly woman who gets a bonus of a dozen photographs for her letter—any of these are sufficient to lure the hopeful patient to the purchase. He wouldn't buy a second-hand bicycle on the affidavit of any of them; but he will give up his dollar and take his chances of poison on a mere newspaper statement which he doesn't even investigate. Every intelligent newspaper publisher knows that the testimonials which he publishes are as deceptive as the advertising claims are false. Yet he salves his conscience with the fallacy that the moral responsibility is on the advertiser and the testimonial giver. So it is; but the newspaper shares it.

When an aroused public sentiment shall make out public men ashamed to lend themselves to this charlatanry, and shall enforce on the profession of journalism those standards of decency in the field of medical advertising which apply to other advertisers, the Proprietary Association of America will face a crisis more perilous than any threatened legislation. For printer's ink is the very life blood of the noxious trade. Take from the nostrum venders the means by which they influence the millions, and there will pass to the limbo of pricked bubbles a fraud whose flagrancy and impudence are of minor import compared to the cold-hearted greed with which it grinds out its profits from the sufferings of duped and eternally hopeful ignorance."

Mr. Adams also points out that as a convincing argument many nostrums guarantee, not a cure, as they would have the public believe, but a reimbursement if the medicine is unsatisfactory. Other concerns send their remedies free, on trial, and still others go so far as to offer a reward for proof that the stuff will not perform the wonders advertised. Mr. Adams says that if every subscriber to a newspaper who is interested in keeping his home free from contamination would protest and keep on protesting against advertising foulness of this nature, the medical advertisers would soon be restricted to the same limits of decency which other classe of merchandise accept as a matter of course, for the average newspaper publisher is sentitive to criticism from his readers. Furthermore, no perpertrator of unclean advertising can afford to go to court on the ground of breach of contract by the newspaper publisher, because his case is indefensible.

No Longer Members of the Proprietary Association.

The Horlick's Malted Milk Company, Racine, Wis., asks us to announce that the firm is no longer a member of the Proprietary Association of America.

Price of Phenacetin (Acetphenetidinum) to be Reduced.

The patent on phenacetin expires on March 27, and after that date it will be sold at 33 cents in ounce lots. If bought or purchased under the pharmacopeic name—acetphenetidinum—the price will be $1.15 a pound or 7 cents an ounce.

Ayer's Cherry Pectoral.

BOSTON, MASS., Feb. 12, 1906.

To the Editor:—I have been interested in the formulæ of "Ayer's Cherry Pectoral" thus far submitted. Here is another from the note book of my father, Dr. J. L. Stevens, who many years ago practiced in Eastern Maine, and copied by him from Braithwaite's Retrospect in 1848:

℞. Morph. acet. ..... gr. lv
Tr. sanguinariæ ..... ʒij
Vin. tart. antim.
Vin. ipecac., āā ..... ʒiij
Syr. pruni virg. ..... ʒiij

G. B. STEVENS, M.D.

DULUTH, MINN., Feb. 15, 1906.

To the Editor:—In Oleson's "Secret Nostrums and Lists of Medicines," published in 1891 in Chicago, is given the same formula of Ayer's Cherry Pectoral as given in THE JOURNAL February 10, except that the earlier formula, taken from the *Pacific Medical and Surg. Journal*, contains gr. iij (instead of gr. iss) of morphin acetate in the three ounce mixture—double the amount of acetate morphin given out by the Ayer people.

HOMER COLLINS, M.D.

Leucoplasia.—Lacapere (*Archives Gén. de Méd.*, 1905), does not believe that a non-syphilitic leucoplasia exists. He thinks that two conditions are usually requisite for its appearance, first, the existence of persistent or recurring mucous patches; this is the primary cause; second, chronic inflammation at the locations of the ulcerations, due chiefly to irritation by the use of tobacco, alcohol, etc., and, secondarily to this, of the constant muscular movements of the parts. He does not say that this absolutely explains all cases. There may be possibly a leucoplasia occurring without preceding mucous patches, but if such a condition exists it must account for only a small proportion of cases.

Medical Legislation

The Postoffice Attitude Toward Nostrums.

The chairman of the National Legislative Committee addressed the heads of the various departments of the national government requesting information relative to proposed medical legislation. These communications were sent in November under the impression that the meeting of the National Legislative Council would be held in December. Events, however, showed that it would be better to defer that conference until Jan. 9, 10 and 11, 1906, at which date it was held. All of the departments manifested their appreciation of the interest thus shown by the American Medical Association. One of the most appreciative letters and one dealing with exceedingly important subjects was from the postmaster-general, as follows:

OFFICE OF THE POSTMASTER-GENERAL,
WASHINGTON, D. C., Jan. 12, 1906.

Dr. Charles A. L. Reed, Chairman, Cincinnati:

My Dear Sir:—Apologies are due you for the delay in answering your communication of November 4, stating that a meeting of the Legislative Committee of the American Medical Association is to be held at Washington in December, and expressing the wish that you be advised of any legislation on medical subjects which may be desired by the Postoffice Department. This delay has been due to the desire to give full consideration to the question of the department's attitude regarding proposed legislation.

The Postoffice Department will recommend to Congress legislation authorizing the exclusion from the mails of all publications and circular matter promiscuously advertising or promoting the sale to the general public of remedies or appliances for the treatment of private or sexual diseases, or proffering to the public personal services in the treatment of such diseases, and making it an offense to deposit such matter in the mails; expressly providing, however, that circular matter advertising such remedies or appliances may be mailed to physicians and legitimate dealers, under cover of envelopes. This department has suppressed many concerns advertising and selling through the mails such remedies or appliances, on evidence that purchases of them were being induced by means of fraudulent representations. In other cases in which conclusive evidence of fraud could not be obtained, the advertising matter has been held to be indecent and its revision required. Other concerns carrying on similar enterprises, however, have so far succeeded in evading the law, and it seems impossible to reach and to suppress them without additional authority from Congress. It is believed that a statute making it an offense to deposit in the mails matter advertising any such remedy, appliance, or treatment, and authorizing its confiscation when found therein, would have a most wholesome moral effect, as well as afford needed protection to credulous and unfortunate persons.

Section 3893 of the Revised Statutes, as amended by the act of Sept. 26, 1888 (1 Supp. R. S. 621), provides for the punishment by fine and imprisonment of any person depositing or causing to be deposited in the mails any "article or thing designed or intended for the prevention of conception or procuring of abortion," of any "article or thing intended or adapted for any indecent or immoral use," or any "written or printed card, letter, circular, book, pamphlet, advertisement or notice of any kind giving information, directly or indirectly, where or how, or of whom or by what means" any of the articles or things enumerated may be obtained or made. The opinion has been expressed by the United States district attorneys that the sending through the mails of information indicating where abortions will be performed or can be obtained, whether in the form of a circular or newspaper advertisement, is not forbidden by this statute; and they have accordingly declined to institute criminal proceedings in such cases. These are frequently arising, and it is desirable that this defect in the statute be remedied by amendment.

It is believed that with these exceptions the existing laws afford as complete authority as the Post-Office

Department can effectively exercise in the direction of purifying the mails and safeguarding the public from fraud and other imposition practiced in connection with the sale of medicines, appliances, etc.

This department will be pleased to receive and consider any suggestions offered by the American Medical Association in the matter of legislation along these general lines. Very truly, yours,

GEORGE B. CORTELYOU.

All of the foregoing letter following the first and preceding the last paragraph has been reduced to the form of a memorandum to which the Committee on Legislation has appended the following:

Resolved, By the American Medical Association that the recommendations of the Postmaster-General, contained in the foregoing memorandum be, and are hereby, approved, and that their enactment into a law is hereby respectfully urged on the Congress.

Physicians and Legislation.

In several states bills are now before the legislatures relating to the control of the "patent-medicine" and food-adulteration evils. The relation of physicians to the health problems of the community gives them vital interest in these bills, and, instead of contenting themselves with talking about the bills at medical societies and passing resolutions which are never heard of outside the medical profession, physicians should appear before the committees to which the bills are referred. More than any other persons, physicians have positive evidence to prove the fraudulent or dangerous character of most patent medicines. In commenting on this subject the *Maryland Medical Journal* says:

"Last winter a bill to regulate the 'patent-medicine' business was introduced in the legislature of Massachusetts. The advocates of the measure argued that its provisions were approved by a great weight of medical opinion, but this argument was disposed of easily and completely. The opposition said: 'There is no evidence whatever that this bill is supported by the medical profession. If physicians really favored the measure, they would do as other citizens do—appear before the committee and urge its passage. No physicians have appeared before the committee, and for us the proof is conclusive that the few lay people, who have appeared, represent the full strength of the proposition, and that the people of Massachusetts, including the physicians, do not want any such legislation.'"

Correspondence

Interstate Reciprocity.

DETROIT, Feb. 15, 1906.

To the Editor:—I have read with more than ordinary interest the article entitled "Interstate Reciprocity," by Dr. George W. Webster, president of the Illinois State Board of Health and secretary of the Council on Medical Education of the American Medical Association, published in THE JOURNAL of February 10. Dr. Webster enumerates several of the fundamental facts entering into the question of interstate reciprocity. To nearly all of such facts quoted I can very heartily subscribe, namely:

First.—Medical education and the license and control of the practice of medicine is purely a state function.

Second.—The state medical board is the only body authorized by the state to determine the conditions and qualifications under which a medical license is granted.

Third.—Medical laws are enacted for the benefit of the people, rather than for the benefit or profit of the medical profession.

Fourth.—Each state has constitutionally established standards of its own, and such standards in consequence lack uniformity.

Fifth.—Each of the 157 medical colleges practically sets its own standard. (This is only true in a degree.)

Sixth.—Various associations of medical colleges and medical societies have established standards, but such standards are ineffective in law from want of authority of both associations and societies.

I have substituted medical societies for "medical boards" in Dr. Webster's text, as the latter could not have been meant and, therefore, is clearly an error, but Dr. Webster, in his enumeration of facts, has omitted at least two sets of facts which are not only fundamental ones, but which are most important from the standpoint of a practical solution of the difficulties met with in the administration of the several state reciprocity clauses, namely:

Seventh.—The great majority of states recognize, and, therefore, have legalized, three or more distinct schools of practice, no one school of which in law is less or greater than the other, and that in all questions involving standards, reciprocity and administration no one school, however prepondering its membership, has the authority to settle such a vital question as reciprocity without the co-operation and support of all the schools of practice recognized in the several states.

Eighth.—No proper or effective medical law has been enacted in any state except by and with the co-operation of the several schools of practice legalized in such states.

Dr. Webster, having omitted in his statement of facts a large percentage of the most material facts connected with and necessary to the success of interstate reciprocity, it naturally follows that his suggestions for a solution of the difficulties met with in the question of interstate indorsement of licenses, based entirely on his defective presentation of facts, must, therefore, be impractical and subject to criticism and deserved opposition, and can not possibly result in any good to the cause which he seemingly advocates.

His statement of facts under "Second," viz., that the state medical board is the only body authorized by the state to determine the condition and qualifications under which a medical license is granted, and his proposed remedy, namely, "Equal requirements, uniformity in entrance requirements, uniformity in length and character of the medical course, uniformity in the scope and character of the examinations, should be done through the organized profession, as embodied in the American Medical Association and by its Council on Medical Education," has only to be quoted to show absolutely the impracticability of his proposition. His proposed remedy is not only in direct conflict with his statement of facts under "Second," but also in direct conflict with the remaining divisions of facts, including "First" to "Eighth," inclusive. It is possible for Dr. Webster, or, for that matter, any one else, or any association of persons, except a state legislature, to confer on the Council of Medical Education of the American Medical Association, of which he is secretary, the authority which he truly states is solely vested in state medical boards?

The proper and equitable administration of the reciprocity clauses of the several states is a matter solely within the authority of the state medical boards interested. These medical boards are capable of fulfilling the duties and responsibilities with which they are charged by the state, and do not require unauthorized persons or associations to measure their authority or to perform their legal duties. The boards, however, are appreciative of intelligent assistance from associations in carrying out their difficult duties, provided there is no usurpation of the authority of the state responsible for their status.

I would very diffidently inform Dr. Webster, as he seemingly has forgotten the matter, that some four years ago a confederation of state medical boards was founded on the basis of the fundamental facts as subscribed by himself. This confederation, with a membership at present of nearly 50 per cent. of all the states, has succeeded in establishing practical medical reciprocity in some twenty-one of the better states, including Dr. Webster's own state, Illinois. It has also adopted an itemized standard of preliminary and medical education, which standard has also been adopted and is being enforced by the Association of American Medical Colleges. It has also, at the solicitation of Dr. Webster, adopted a "scope and character of examination." In the brief period of four years it has already more than fulfilled all the several divisions of basis for reciprocity advocated by Dr. Webster. No confederation or association ever founded in this or any other country has accomplished such a quality and quantity of practical work in so short a period, and while Dr. Webster seemingly

has overlooked the existence and deeds of the American Confederation of Reciprocating, Examining and Licensing Medical Boards, a lesser authority, perhaps, the Association of American Medical Colleges, gives it due praise and credit.

It may be of interest to the profession to know that this Association of American Medical Colleges and the American Confederation are working together harmoniously and practically along similar lines, having in view the unification of the standards of preliminary and medical education. I will prophesy that at the next meeting of the Association of American Medical Colleges, to be held at Pittsburg, March 19, 1906, its membership will be astounded at the amount of practical work accomplished since its last meeting, and also at the quality of such work.

I would suggest to Dr. Webster and to his committee the virtue of co-operation with the above association, in which much practical good along the lines of the committee's legitimate objects could be accomplished, as opposed to his entering a field entirely without the range of the committee's power and status.

B. D. HARISON,
Secretary Michigan State Board of Registration in Medicine, and of American Confederation of Reciprocal Examining and Licensing Medical Boards.

Johns Hopkins Course Not to be Lengthened.

BALTIMORE, Feb. 13, 1906.

To the Editor:—In your last issue I find a statement that I should be glad to have you correct. The statement is this:

"The authorities of the Johns Hopkins University are considering the question of lengthening the course in the collegiate department from three to four years, and that in the medical school from four to five years."

A committee is working on the problem of the college course, but what that committee will report I do not know. There is absolutely no foundation for the statement that the authorities of this university are considering the question of lengthening the course in the medical school from four to five years.

IRA REMSEN, President.

Prophylaxis of Venereal Diseases.

SEATTLE, WASH., Feb. 14, 1906.

To the Editor:—As chairman of the committee of venereal prophylaxis of the Washington State Medical Association, I desire to appeal to your readers to aid this committee in securing the names and addresses of physicians who would forward notice of any legislative action, state or municipal, or action taken by any society, corporation, or individual that would bear on this subject.

The object sought is to classify and to redistribute such literature in a condensed form and thus lead to a more uniform and concentrated action.

At the same time, we wish to compile a list of the physicians who desire to receive and to exchange literature, abstracts, papers, or reprints bearing on this subject and later, if possible, to establish a bureau of inquiry to which references may be made by any of those desiring knowledge on this subject.

Therefore, we should be very pleased to receive the names and addresses of any physicians who would like to take part in the work of advancing this branch of preventive medicine. Such a list would not be given publicity.

G. S. PETERKIN, M. D.

Prostitution.

LOS ANGELES, CAL. Feb. 17, 1906.

To the Editor—Articles on such subjects as that discussed by Dr. Howard A. Kelly in THE JOURNAL, February 10, usually provoke prolific discussion. Medical men are generally aware of the futility of regulation. Such movements are usually promoted for the graft, for which they afford an unequaled opportunity.

Dr. Kelly's suggested remedy is very discouraging, in view of the fact that this evil has attained its present magnitude in a nation of Puritan origin, in which human belief in divine intervention is widely prevalent. Dr. Kelly's deserved reputation as a surgeon is dependent on his knowledge of pure surgical science, divested of all dogmatic tradition. Religion is a large factor in the prevention of evil; publicity and public opprobium is a still greater deterrent, but the Moses who will lead us out of the sexual wilderness must take his cue from Nature. Nature's method (and she will ultimately triumph) is to subdue sexual sins against society by causing sterility and death of the sinner. This is a slow process, but might be materially hastened by our co-operation.

When will mankind cease to overvalue the life of criminals, and to extend to them the privilege of reproducing their kind? The greatest obstacle to the accomplishment of these ends is dogma.

FRANK GORDON.

Psychopathic Manifestations of Non-Insane Psychoneuroses.

NEW YORK, Feb. 16, 1906.

To the Editor:—In a letter published in THE JOURNAL, Dec. 16, 1895, I said that the term "psychosomatasthenia," coined and introduced by Dr. John Punton, belonged to what I am in the habit of calling "Lexicon-Greek." I also said that phrenosomatitis might express the same meaning, but that I would not dare to offer it for adoption before consulting Greek friends regarding its acceptability. I wrote to my esteemed friend Dr. B. Leonardos, the director of the Museum of Inscriptions in Athens, who is a physician and a philologist, and received the following information: "The word phrenosomatitis does not seem to me appropriate. Psychosomatasthenia is to be rejected. I believe that the disease can not be named with one word, and that even two words which will correspond exactly with the meaning can not easily be found."

A. ROSE, M.D.

A. W. Orriss Is Wanted.

ORIOLE, MD., Feb. 12, 1906.

To the Editor:—Any one having any information which will lead to the location of a man calling himself A. W. Orriss, M.D., will confer a favor on the members of the profession in Somerset County, Maryland, by communicating with the undersigned. This man represents himself to be the proprietor of a medical book store and calls on physicians offering to exchange new editions of medical works for the old editions in the physician's library. He exacts a payment from the physician "to cover freight charges and as an evidence of good faith," so he says, and departs, and this is the last any one sees of him. He operated in Somerset county to a very profitable advantage to himself and any information which would lead to his arrest would be greatly appreciated.

RALPH L. HOYT,
Secretary Somerset County Medical Society.

Marriages

EUGENE A. STURM, M.D., to Miss Mae Salb, both of Jasper, Ind., February 12.

H. J. H. HOEVE, M.D., to Miss Pearl Brown, both of Des Moines, Iowa, February 2.

WILLIAM L. DUNN, M.D., to Mrs. Gussie Bergman, both of Oakland, Cal., February 8.

ROBERT C. CHAMBERLAIN, M.D., to Miss Aleta McCall, both of Tiffin, Ohio, February 15.

WILLIAM E. LUTER, M.D., to Miss Eleanor Maury, both of San Antonio, Texas, February 6.

HENRY LOUIS HAMMOND, M.D., Dayville, Conn., to Miss Cora Ward of Niles, Mich., February 6.

BENJAMIN VAN DORN HEDGES, M.D., Plainfield, N. J., to Miss Adele Cutts Williams of Chicago.

JOSEPH HAMILTON, M.D., Fruitvale, Cal., to Miss Jessie Aitken of Alameda, Cal., February 2.

BENJAMIN F. LEHMAN, M.D., Home City, Ohio, to Miss Edith Sayler of Cincinnati, February 20.

ALBERT W. SLAUGHTER, M.D., Paris, Ill., to Miss Mary Golden of Urbana, Ill., February 10.

STUART Z. PEOPLES, M. D., to Miss Helen Marie Anderson, both of Petaluma, Cal., February 4.

WILLIAM KEITH MITTENDORF, M.D., to Miss Marie Alvina Borchers, both of New York, February 15.

JOSEPH SPENCER DE JARNETTE, M.D., to Chestney Hopkins, M.D., both of Staunton, Va., February 14.

WLADISLAW A. KUFLEWSKI, M.D., Chicago, to Miss Angeline R. Cwiklinski of Buffalo, N. Y., February 21.

WILLIAM C. PETERS, M.D., to Miss Adah Bryant, both of Bangor, Maine, at Concord, Mass., February 1.

EBER D. MCKINLEY, M.D., Atlanta, Ind., to Miss Effie L. Howard of Athens, Ohio, at Indianapolis, February 7.

RAYMOND DEAN TOMPKINS, M.D., Jasper, Fla., to Miss Elizabeth Wisling Massey of Philadelphia, February 21.

MAJOR FREDERICK P. REYNOLDS, M.D., U. S. Army, to Miss Hortense Cecilia Child of Los Angeles, Cal., February 21.

JEHIEL WESTON CHAMBERLIN, M.D., St. Paul, Minn., to Mrs. Jane Huntington Yale of Minneapolis, Minn., February 15.

JOHN P. REDMOND, M.D., Dysart, Iowa, to Miss Freda C. Schley of Iowa City, Iowa, at Cedar Rapids, Iowa, February 7.

Deaths

Newell **E. Landon, M.D.** College of Physicians and Surgeons in the City of New York, 1876; a member of the American Medical Association, New York State Medical Association, Central New York Medical Association, Wayne County Medical Association, and New York & New England Railway Surgeons' Association; surgeon for the New York Central, West Shore and Pennsylvania Railways; consulting physician to the State Custodial Asylum for Feeble-minded Women; three times president of the village of Newark, N. Y., and one of the most prominent physicians of Wayne County, died at his home in Newark, February 7, from cerebral hemorrhage, after an illness of two months, aged 52.

John Slade Ely, M.D. College of Physicians and Surgeons in the City of New York, 1886; assistant in pathology in his alma mater; professor of pathology in the Women's Medical College and later pathologist at the Bellevue Hospital; professor of theory and practice of medicine, Yale University Medical Department, New Haven, and one of the most brilliant members of that faculty; in 1896 president of the New York Pathological Society, died at his home in New Haven, February 7, from concussion of the brain, the result of an accident two days before, when he was thrown from his horse, sustaining a fracture of the skull, aged 45.

Francis Noel Burke, M.D. Medical College of Ohio, Cincinnati, 1856; a surgeon in the Army during the Civil War and at its close chief surgeon of the Department of the Gulf; instrumental in the organization of the Phillips County (Ark.) Medical Association and also of the Arkansas Medical Society; for many years president of the local board of examiners of pensions, Helena, died at the residence of his brother in Jacksonville, Ala., January 27, from cerebral hemorrhage, after an illness of two years, aged 77.

John C. Spray, M.D. Chicago Medical College, 1873; of Chicago; from 1878 to 1889 medical superintendent of the Cook County Hospital for the Insane, Dunning; an alienist of national repute and one of the earliest advocates of the idea that amusement should not be overlooked in the treatment of the insane, died at the People's Hospital, Chicago, February 20, from pneumonia, after a short illness, aged 60.

Thomas G. Wright, M.D. Albany (N. Y.) Medical College, 1896, a surgeon in the New York National Guard assigned to the Second Regiment, Company D, died at his home in Troy, N. Y., from cerebral hemorrhage, after a long illness, aged 32. He was a member of the Rensselaer County Medical Society and of the Medical Society of Troy and Vicinity.

Harry M. Nickerson, M.D. Medical School of Maine at Bowdoin College, Brunswick, 1889; a member of the American Medical Association; for two years city physician of Portland, and for two years surgeon of the Maine Naval Reserve, died in the Maine Insane Hospital, Augusta, February 2, aged 41.

Oscar Wiley Woods, M.D. University of Virginia Medical Department, Charlottesville, 1898, assistant surgeon U. S. Army, who saw service in Cuba during the Spanish-American War and afterward served three years in the Philippine Islands, died at the home of his brother in Roanoke, Va., from tuberculosis, February 10, after a long illness, aged 35.

Robert S. Kennedy, M.D. Jefferson Medical College, Philadelphia, 1866, of New Sheffield, Pa., for nearly thirty years editor of the *Beaver County Star*, died at the home of his sister in Spring Garden, Pa., February 8, from cerebral hemorrhage, aged 64.

Thomas B. Hunt, M.D. University of Louisville Medical Department, 1864, assistant surgeon in the Fifty-fourth Kentucky Mounted Volunteer Infantry during the Civil War, died at his home in Warsaw, Ill., Nov. 16, 1905, from rheumatic endocarditis, after an illness of four days, aged 75.

James E. Miller, M.D. Missouri Medical College, St. Louis, 1881, died recently at his home in Louisiana, Mo., and was buried February 1. The physicians of Louisiana at a meeting February 2 unanimously adopted a resolution setting forth their respect and esteem for their deceased brother.

Francis Griffin, M.D. Rush Medical College, Chicago, 1869; a veteran of the Civil War; for many years treasurer for the local school district, died at his home in Mapleton, Iowa, February 6, from heart disease, after an illness of two years, aged 59.

George Janeway Howell, M.D. the University and Bellevue Hospital Medical College, New York City, 1901, a member of the Perth Amboy (N. J.) Board of Health, died at his home in that city, February 3, from pneumonia, aged 25.

Daniel M. MacMartin, M.D. College of Physicians and Surgeons in the City of New York, 1877, a specialist in diseases of the eye, ear, nose and throat, died at his home in Spokane, Wash., from valvular heart disease, aged 52.

Noble W. Mountain, M.D. State University of Iowa College of Medicine, Iowa City, 1873, a member of the Medical Society of the State of California, died recently at his home in Placerville, Cal., and was buried February 4.

Joseph Foulke, M.D. Department of Medicine of the University of Pennsylvania, Philadelphia, 1854, of Philadelphia, died at the home of his daughter in Milwaukee, February 10, after an illness of two weeks, aged 79.

Ogden Backus, M.D. Department of Medicine of the University of Pennsylvania, Philadelphia, 1883, of Rochester, N. Y., died at the City Hospital, Rochester, from postoperative pneumonia, February 10, aged about 50.

William M. Shoemaker, M.D. Department of Medicine of the University of Pennsylvania, Philadelphia, died at his home in Georgetown, Washington, D. C., February 8, after an illness of more than a year, aged 53.

Florence De Hart, M.D. Women's Medical College of the New York Infirmary, New York City, 1893, resident physician of the State Home for Girls, Trenton, N. J., died suddenly in that city, February 12, from intestinal disease.

E. F. Darby, M.D. Hospital College of Medicine, Louisville, Ky., 1884, formerly a practitioner of Columbia, S. C., died at his home in Lynchburg, S. C., February 9, after a short illness.

John Findlay Warren, M.D. McGill University Medical Department, Montreal, 1896, of Leeds, N. D., died at a hospital in Fargo, February 10, from hemorrhage of the lungs, aged 37.

Harry Y. Graham, M.D. Cincinnati College of Medicine and Surgery, died at his home in Winton Place, Cincinnati, February 10, from dropsy, after a prolonged illness.

Culvin Foree Violette, M.D. University of Louisville Medical Department, 1843, died at his home near Napoleon, Ky., January 10, from senile debility, aged 86.

Reuben B. Mayes, M.D. Memphis (Tenn.) Hospital Medical College, 1886, died at his home in Myrtle, Miss., February 4, from pneumonia, after a short illness.

Samuel C. Latham, M.D. College of Physicians and Surgeons of Keokuk, Iowa, 1870, died at his home in Enfield, Ill., after a long illness, January 28, aged 72.

James G. Conner, M.D. Rush Medical College, Chicago, 1867, health officer of Ionia, Mich., died suddenly at his office in that city, and was buried February 11.

J. E. Mann, M.D. Hahnemann Medical College and Hospital, Chicago, 1884, of Louisville, Ky., died in Liberal, Kan., February 5, after a long illness.

William A. Hahn, M.D. College of Physicians and Surgeons, Baltimore, 1882, died suddenly at his home in Baltimore, February 14, aged 49.

Robert C. Pearson, M.D. New York University, New York City, 1860, assistant surgeon of the Fifty-eighth North Carolina Infantry, C. S. A., died at his home in Morganton, N. C., January 28, aged 68.

William Wakefield, M.D. University of Louisville Medical Department, 1859, died at his home in Humboldt, Kan., January 30, aged 83.

F. M. Attlebury, M.D. Missouri Medical College, St. Louis, 1896, died at his home in Needmore, Mo., January 28, from pneumonia.

Deaths Abroad.

A. Filippi, M.D., professor of medical jurisprudence t Rome, and author of popular manuals on the subject, died at Rome, December 30, aged 69.

D. Chiara, M.D., professor of obstetrics and gynecology at Florence from 1883 to 1893, died at Turin, December 8, after ten years of illness, aged 66.

J. V. Wichmann, M.D., professor of pediatrics at Copenhagen, died recently. His name is familiar to readers of Scandinavian medical literature to which he was a frequent contributor.

E. Pasquali, M.D., president of the Italian Obstetrical Society and director of the gynecologic clinic at Rome, died at Rome, January 5, aged 81. He was professor of obstetr' for thirty-five years, and a pioneer in gynecology in Italy.

J. Cnopf, M.D., died at Nuremberg recently, aged 84. He was a leading spirit in professional matters, a popular pediatrist and a frequent contributor to periodical literature to the very last. His youthful vigor at his advanced age was frequently remarked.

The Public Service

Army Changes.

Memorandum of changes of stations and duties of medical officers, U. S. Army, week ending Feb. 17, 1906:

Hoff, John Van R., asst.-surgeon-general, relieved from further duty at Fort Leavenworth, Kan., and, on expiration of leave of absence, to proceed to Omaha, and report to the commanding general, Department of the Missouri, for duty as chief surgeon of that department.

Bushnell, Geo. E., surgeon, Munson, E. L., and Hutton, Paul C., asst.-surgeons, appointed members of a board of officers to meet at the General Hospital, Fort Bayard, N. M., March 12, for the examination of such officers of the medical department as may be ordered before it to determine their fitness for advancement.

Barney, Chas. N., asst.-surgeon, ordered to report on March 12, 1906, to Major Bushnell, surgeon, president, examining board, General Hospital, Fort Bayard, N. M., for examination to determine his fitness for advancement.

Reynolds, Charles R., Hutton, Paul C., Dale, Frederick A., Roberts, William M., and Farr, Charles W., asst.-surgeons, are advanced from the grade of first lieutenant to that of captain, with rank from Feb. 11, 1906.

Hallock, H. M., surgeon, sick leave of absence extended 30 days.

Woodson, R. S., surgeon, ordered to proceed from Fort McDowell, Cal., to Presidio of San Francisco, to accompany detachment of First Battalion, 4th Infantry, to Fort Slocum, N. Y. On completion of this duty Major Woodson will return to his proper station.

Stephenson, William, surgeon, granted 30 days' leave of absence.

Millikin, John D., dental surgeon, arrived at Fort Leavenworth, Kans., for duty.

Wertenbaker, Clark L., contract surgeon, returned to Madison Barracks, N. Y., from leave of absence.

Peck, Luke B., contract surgeon, returned to Fort Andrews, Mass., from leave of absence.

Shellenberger, James E., contract surgeon, relieved from duty at Fort Sam Houston, Texas, and ordered to Fort Ringgold, Texas, for duty.

Macy, Fred S., contract surgeon, arrived at Fort Adams, R. I., for duty.

Eber, Albert H., and Dickenson, Clarence F., contract surgeons, left San Francisco on transport *Meade* for Philippine service.

Davis, Oscar F., contract surgeon, relieved from duty at Jefferson Barracks, Mo., and ordered to duty at Fort Des Moines, Iowa.

Purnell, Julius M., contract surgeon, arrived at Fort McDowell, Cal., for duty.

Richardson, William H., contract surgeon, returned to Fort Sheridan, Ill., from leave of absence.

McCallum, Francis M., contract surgeon, granted leave of absence for one month.

Dougherty, James C., contract surgeon, relieved from duty at Fort Slocum, N. Y., and ordered to Fort Jay, N. Y., to accompany 8th Infantry thence to Philippine service.

Navy Changes.

Changes in the Medical Corps, U. S. Navy, for the week ending Feb. 17, 1906:

Marsteller, E. H., surgeon, detached from the *Columbia* and ordered home to wait orders.

Page, J. E., surgeon, detached from the *Franklin* and ordered to the *Columbia*.

Stone, E. P., surgeon, detached from the Naval Academy and ordered to the *Rhode Island*, February 19.

Kerr, D. B., surgeon, detached from the *Boston* and ordered home to wait orders.

Bell, W. H., surgeon, ordered to the *Nevada*, February 24.

Cook, F. C., surgeon, detached from the *Nevada* and ordered to the Naval Academy.

Richardson, R. R., P. A. surgeon, detached from the Naval Hospital, Mare Island, Cal., and ordered to the *Boston*.

Porter, F. E., asst.-surgeon, detached from the Naval Hospital, New York, N. Y., and ordered to the *Rhode Island*, February 19.

Bogan, F. M., P. A. surgeon, detached from the Naval Hospital, Yokohama, Japan, and ordered home to wait orders.

Public Health and Marine-Hospital Servic .

List of changes of station and duties of commisisoned and noncommissioned officers of the Public Health and Marine-Hospital Service for the seven days ended February 14:

Irwin, Fairfax, surgeon, detailed as member of Revenue Cutter Service Retiring Board, to meet in Philadelphia, Pa., February 15.

Oakley, J. H., P. A. surgeon, granted leave of absence for one month from March 1.

Cumming, H. S., P. A. surgeon, relieved from duty at San Francisco Quarantine Station, and directed to proceed to Yokohama, Japan, for duty in office of American Consulate, relieving P. A. Surgeon Dunlop Moore.

Robertson, H. McG., assistant surgeon, detailed as member of Revenue Cutter Service Retiring Board to meet in Philadelphia, Pa., February 15.

Bailey, C. A., acting asst.-surgeon, granted thirty days' leave of absence from February 13.

Bullard, J. T., acting asst.-surgeon, granted leave of absence for thirty days from February 13.

Health Reports.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, Public Health and Marine-Hospital Service, during the week ended February 16, 1906:

SMALLPOX—UNITED STATES.

California: San Francisco, Jan. 27-Feb. 3, 21 cases, 2 deaths.
District of Columbia: Washington, Feb. 3-10, 1 death.
Florida: Jacksonville, Feb. 3-10, 2 cases, 1 death; Cynthiana, 2 cases; Espanola, 3 cases.
Georgia: Augusta, Feb. 6-12, 5 cases.
Indiana: Allen County, Dec. 1-31, 1 death.
Kentucky: Covington, Feb. 3-10, 1 case.
Louisiana: New Orleans, Feb. 3-10, 4 cases.
Maryland: Baltimore, Feb. 3-10, 6 cases.
Missouri: St. Louis, Feb. 3-10, 6 cases.
Ohio: Cincinnati, Feb. 2-9, 7 cases.
South Carolina: Georgetown, Feb. 15, 1 case (imported).
Tennessee: Memphis, Jan. 24-Feb. 7, 5 cases, 1 death.
Wisconsin: Appleton, Feb. 3-10, 1 case; La Crosse, 1 case.

SMALLPOX—FOREIGN.

Brazil: Pernambuco, Dec. 15-31, 39 deaths.
New Brunswick, Kings County, Feb. 4, present; Queen's County, present, Sunbury County, present, York County, present.
Canada: Toronto, Jan. 27-Feb. 3, 1 case.
China: Shanghai, Dec. 23-30, 1 death.
France: Paris, Jan. 27-Feb. 2, 13 cases, 2 deaths.
Gibraltar: Jan. 1-Feb. 4, 5 cases.
Greece: Athens, Jan. 8-15, 1 death.
India: Bombay, Jan. 9-16, 2 deaths; Calcutta, Dec. 30-Jan. 6, 61 deaths; Karachi, Jan. 7-14, 4 cases, 4 deaths; Madras, Jan. 6-12, 19 deaths; Rangoon, Dec. 30-Jan. 6, 10 deaths.
Italy: General, Jan. 18.25, 66 deaths.
Japan: Formosa, Dec. 1-31, 3 cases.
Russia: Moscow, Dec. 23-Jan. 13, 5 cases, 3 deaths; Odessa, Jan. 13-27, 38 cases, 4 deaths; St. Petersburg, Dec. 30-Jan. 20, 19 cases, 7 deaths.
Spain: Barcelona, Jan. 21-31, 7 deaths.

YELLOW FEVER—FOREIGN.

Cuba: Habana, Feb. 11, 1 case.
Honduras: El Paraiso, Jan. 19, 1 death.
Mexico: Merida, Jan. 28-Feb. 3, 2 cases, 2 deaths; Vera Cruz, Jan. 21-27, 2 cases, 2 deaths.
Nicaragua: Managua, Dec. 23-30, 1 death.

CHOLERA—FOREIGN.

India: Calcutta, Dec. 30-Jan. 6, 72 deaths; Madras, Jan. 6-12, 1 death; Rangoon, Dec. 30-Jan. 6, 3 deaths.
Russia: Government of Lomza, Jan. 4-14, 6 cases, 2 deaths; Government of Plock, Dec. 18-29, 21 cases, 13 deaths.

PLAGUE—INSULAR.

Hawaii: Kual, Feb. 13, 2 deaths.

PLAGUE—FOREIGN.

Africa: Mozambique, Nov. 19-Dec. 6, 3 deaths. Total to Dec. 6, 58 cases, 28 deaths.
India: Bombay, Jan. 9-16, 24 deaths; Calcutta, Dec. 30-Jan. 6, 25 deaths; Karachi, Jan. 7-14, 9 cases, 8 deaths; Madras, Jan. 6-12, 1 death; Rangoon, Dec. 30-Jan. 6, 30 deaths.
Japan: Formosa, Dec. 1-31, 12 deaths; Kagawa Ken, to Jan. 10, 2 cases; Kobe, 94 cases, Nara Ken, 2 cases; Osaka, 140 cases; Yamaguchi (Shimonoseki) 8 cases, 1 death.
Mauritius: Dec. 14-28, 7 cases, 5 deaths.
Persia: Seistan, Jan. 18, 200 deaths.

Book Notices

INFANTILE MORTALITY AND INFANTS' MILK DEPOT. By G. F. McCleary, M.D., D.P.H., Medical Officer of Health of the Metropolitan Borough of Battersea. Cloth. Pp. 135. Price, 6 shillings net. London: P. S. King & Son, 1905.

This book deals with the problem of infant mortality and the measures taken to reduce it in various countries, in France, England and the United States. Attention is called at the outset to the declining birth rate, both in England itself and in some of the colonies, especially Australia. It is a declining fertility which has evidently stimulated McCleary to write the book. He points out the urgent necessity of reducing the high mortality among infants in order to offset the low birth rate, and in discussing the causes of this high mortality gives the chief place to improper feeding. To correct this he lays down two general principles: First, a more general encouragement of breast feeding, and, second, where this is impossible the provision of a pure, properly prepared cow's milk. The elaboration of these two principles constitutes the bulk of the book, and while throughout due emphasis is laid on the superiority of breast feeding, McCleary concerns himself mainly with a discussion of the methods in vogue to attain the second, i. e., the supply of a pure substitute food. This resolves itself into a detailed account of the now well-known "milk laboratories," "stations" or "depots" as they are conducted in different countries.

Two institutions in France are first described: the *Consultation de Nourrissons* and the *Goutte de Lait*. The former has for its chief object the encouragement of breast feeding, food and money prizes being awarded to nursing mothers whose infants make satisfactory progress, the mothers with their infants reporting at stated intervals to a dispensary or hospital. As a natural development from this institution arose the *Goutte de Lait*, the purpose of which is the provision of a pure milk, whole or modified, to such infants as have been deprived of their natural food supply. Rigid medical oversight of the infants is maintained in both of these organizations; if they do not report regularly the milk is stopped.

The American laboratories are next described, the Strauss stations in New York being taken as a type. Lastly, the English "depots" are described much in detail. McCleary considers these various institutions in the order in which he apparently thinks they have been established, but makes no mention of the first one of the kind ever started, that in Boston in the summer of 1890 under the direct supervision of Rotch. The first *Goutte de Lait* is reported as being established in Paris in 1892, the first "depot" in England in 1899. The wide distribution of these stations is evidenced from the list given, showing their establishment throughout England, in Europe, North and South America. Most of the English "depots" are under municipal control, all in America under private control except the one at Rochester, which is a municipal organization. This is mentioned in high terms by Dr. McCleary as being superior to any similar "depot" in England. One of the best features of this laboratory, by the way, is the modifying which is done at the farm in the country. The importance of the farm and dairy end of the milk problem is duly emphasized throughout the book.

The work as a whole is an extremely interesting account of the world-wide movement for a better and purer milk for infants, a movement arising in France and England from a contemplation of the declining birth rate and the consequently greater necessity of preserving the infants actually born, and arising in the United States from humanitarian motives, pure and simple. It is of interest mainly, however, to health officials and to those pediatricians actively engaged in obtaining for city infants a supply of pure milk. It is of no help to a physician in solving the problem of a given case of difficult feeding. No details are given. To those familiar with the methods in vogue in American cities there is nothing new in the book, and they will derive but little help in solving the problem of city milk. In this respect at least our confrères across the water have taken a leaf out of the Yankee book and adapted an American institution to their own municipal peculiarities.

A TEXT-BOOK OF THE DISEASES OF THE EAR, NOSE AND PHARYNX. By D. B. St. John Roosa, M.D., LL.D., and B. Douglass, M.D. Cloth. Pp. 621. Price, $3.00 net. New York: The MacMillan Co., 1905.

This volume contains over eighty pages devoted to the anatomy and a brief review of the physiology of the ear. The subject of foreign bodies in the ear is set forth very fully and in a most interesting manner. Eighty-two pages are devoted to the diseases of the nose, throat and nasopharynx, to which so many aural affections owe their origin. This section is fairly complete, although the student might desire somewhat fuller directions. Thus, speaking of cauterization of the turbinates, "a flat nasal electrode attached to a proper electric apparatus" is recommended. And when enlarged tonsils are present with adenoids the authors advise the removal of the tonsils before attacking the adenoids, but do not express any preference as to the method. Their reasons for dividing chronic non-suppurative inflammation of the middle ear into catarrhal and proliferous inflammation, and the diagnosis between both and diseases of the labyrinth by means of the tuning-fork, are elaborated. They protest against the tendency of some neurologists to call all cases in which vertigo is a symptom Ménière's disease, and would limit the term to disease of the labyrinth. Various radical operations, including Roosa's, for mastoid disease are described in detail. A chapter on deaf-mutism, with suggestions for the mechanical relief of deafness, closes the volume. There are 108 cuts illustrating the text, but in a few cases the letters referred to in the legends are lacking. The text is generally clear and the diction good. We find a few long, involved sentences, such as the second paragraph on page 340. A few grammatical and rather numerous typographical errors will no doubt be corrected in subsequent editions. The book may be recommended as a safe guide.

THE PATHOLOGY OF THE EYE. By J. H. Parsons, B.S., D.Sc. Vol. II. Histology.—Part II. Cloth. Pp. 770. Price, $3.50. New York: G. P. Putnam's Sons, 1905.

In the second volume of this elaborate work Mr. Parsons has placed the science of medicine in general and that of ophthalmology in particular under a deep obligation. He reviews and profusely illustrates the histology of the crystalline lens, the vitreous, choroid, retina, optic nerve, orbit and the lacrimal apparatus. It must be borne in mind that the histology spoken of refers not only to normal conditions but to pathologic ones, so that this work is practically a textbook dealing with abnormal conditions generally found in the structures mentioned. Probably the most valuable portion of the work is that touching the various tumors of the eye, and we know of no monograph on the subject that compares with it in a practical demonstration of the changes found in this class of tissue alteration. Although the micro-photographs and illustrations generally are no better in quality than those seen in other books of the kind, they serve their purpose very well, and even when only diagrammatic, are useful. We especially commend the index of illustrations and think that many other writers might well take a leaf from Mr. Parsons' monograph in this particular. Space does not permit a reference to the many important original observations of the author, but we can not refrain from drawing the reader's attention to the elaborate descriptions of choroidal changes, especially of the neoplasms, as affect that membrane. We are certain that the work will long stand as an important contribution to the pathology as well as to the normal histology of the eye.

A SYSTEM OF MEDICINE. By Many Writers. Edited by T. C. Allbutt and H. D. Rolleston. New Edition. Revised Throughout with Additions. Vol. I. Cloth. Pp. 1209. Price, $5.00. New York: The MacMillan Co., 1905.

This is the first volume of the second edition of this system. It is the intention of the authors to revise and bring out one volume a year, each new volume corresponding to one of the first edition, so that the original edition will gradually be superseded by the new. Besides the prolegomena, Volume I contains some of the acute affections, such as erysipelas, influenza, diphtheria, infective endocarditis, cerebrospinal fever and enteric fever. Cholera and plague have been transferred to the tropical medicine section. The first article, on the history of medicine, is a new contribution by Allbutt. The article on medical statistics has been rewritten entirely. The arrangement of the article on dietetics has been altered somewhat, and

Robert C. Pearson, M.D. New York University, New York City, 1860, assistant surgeon of the Fifty-eighth North Carolina Infantry, C. S. A., died at his home in Morganton, N. C., January 28, aged 68.

William Wakefield, M.D. University of Louisville Medical Department, 1859, died at his home in Humboldt, Kan., January 30, aged 83.

F. M. Attlebury, M.D. Missouri Medical College, St. Louis, 1896, died at his home in Needmore, Mo., January 28, from pneumonia.

Deaths Abroad.

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The Public Service

Army Changes.

Memorandum of changes of stations and duties of medical officers, U. S. Army, week ending Feb. 17, 1906:

Hoff, John Van R., asst.-surgeon-general, relieved from further duty at Fort Leavenworth, Kan., and, on expiration of leave of absence, to proceed to Omaha, and report to the commanding general, Department of the Missouri, for duty as chief surgeon of that department.

Bushnell, Geo. E., surgeon, Munson, E. L., and Hutton, Paul C., asst.-surgeons, appointed members of a board of officers to meet at the General Hospital, Fort Bayard, N. M., March 12, for the examination of such officers of the medical department as may be ordered before it to determine their fitness for advancement.

Barney, Chas. N., asst.-surgeon, ordered to report on March 12, 1906, to Major Bushnell, surgeon, president, examining board, General Hospital, Fort Bayard, N. M., for examination to determine his fitness for advancement.

Reynolds, Charles R., Hutton, Paul C., Dale, Frederick A., Roberts, William M., and Farr, Charles W., asst.-surgeons, are advanced from the grade of first lieutenant to that of captain, with rank from Feb. 11, 1906.

Hallock, H. M., surgeon, sick leave of absence extended 30 days.

Woodson, R. S., surgeon, ordered to proceed from Fort McDowell, Cal., to Presidio of San Francisco, to accompany detachment of First Battalion, 4th Infantry, to Fort Slocum, N. Y. On completion of this duty Major Woodson will return to his proper station.

Stephenson, William, surgeon, granted 30 days' leave of absence.

Millikin, John D., dental surgeon, arrived at Fort Leavenworth, Kans., for duty.

Wertenbaker, Clark L., contract surgeon, returned to Madison Barracks, N. Y., from leave of absence.

Peck, Luke B., contract surgeon, returned to Fort Andrews, Mass., from leave of absence.

Shellenberger, James E., contract surgeon, relieved from duty at Fort Sam Houston, Texas, and ordered to Fort Ringgold, Texas, for duty.

Macy, Fred S., contract surgeon, arrived at Fort Adams, R. I., for duty.

Eber, Albert H., and Dickenson, Clarence F., contract surgeons, left San Francisco on transport *Meade* for Philippine service.

Davis, Oscar F., contract surgeon, relieved from duty at Jefferson Barracks, Mo., and ordered to duty at Fort Des Moines, Iowa.

Purnell, Julius M., contract surgeon, arrived at Fort McDowell, Cal., for duty.

Richardson, William H., contract surgeon, returned to Fort Sheridan, Ill., from leave of absence.

McCallum, Francis M., contract surgeon, granted leave of absence for one month.

Dougherty, James C., contract surgeon, relieved from duty at Fort Slocum, N. Y., and ordered to Fort Jay, N. Y., to accompany 8th Infantry thence to Philippine service.

Navy Changes.

Changes in the Medical Corps, U. S. Navy, for the week ending Feb. 17, 1906:

Marsteller, E. H., surgeon, detached from the *Columbia* and ordered home to wait orders.

Page, J. E., surgeon, detached from the *Franklin* and ordered to the *Columbia*.

Stone, E. P., surgeon, detached from the Naval Academy and ordered to the *Rhode Island*, February 19.

Kerr, D. B., surgeon, detached from the *Boston* and ordered home to wait orders.

Bell, W. H., surgeon, ordered to the *Nevada*, February 24.

Cook, F. C., surgeon, detached from the *Nevada* and ordered to the Naval Academy.

Richardson, R. R., P. A. surgeon, detached from the Naval Hospital, Mare Island, Cal., and ordered to the *Boston*.

Porter, F. E., asst.-surgeon, detached from the Naval Hospital, New York, N. Y., and ordered to the *Rhode Island*, February 19.

Bogan, F. M., P. A. surgeon, detached from the Naval Hospital, Yokohama, Japan, and ordered home to wait orders.

Public Health and Marine-Hospital Servic .

List of changes of station and duties of commisisoned and noncommissioned officers of the Public Health and Marine-Hospital Service for the seven days ended February 14:

Irwin, Fairfax, surgeon, detailed as member of Revenue Cutter Service Retiring Board, to meet in Philadelphia, Pa., February 15.

Oakley, J. H., P. A. surgeon, granted leave of absence for one month from March 1.

Cumming, H. S., P. A. surgeon, relieved from duty at San Francisco Quarantine Station, and directed to proceed to Yokohama, Japan, for duty in office of American Consulate, relieving P. A. Surgeon Dunlop Moore.

Robertson, H. McG., assistant surgeon, detailed as member of Revenue Cutter Service Retiring Board to meet in Philadelphia, Pa., February 15.

Bailey, C. A., acting asst.-surgeon, granted thirty days' leave of absence from February 13.

Bullard, J. T., acting asst.-surgeon, granted leave of absence for thirty days from February 13.

Health Reports.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, Public Health and Marine-Hospital Service, during the week ended February 16, 1906:

SMALLPOX—UNITED STATES.

California: San Francisco, Jan. 27-Feb. 3, 21 cases, 2 deaths.
District of Columbia: Washington, Feb. 3-10, 1 death.
Florida: Jacksonville, Feb. 3-10, 2 cases, 1 death; Cynthiana, 2 cases; Espanola, 3 cases.
Georgia: Augusta, Feb. 6-12, 5 cases.
Indiana: Allen County, Dec. 1-31, 1 death.
Kentucky: Covington, Feb. 3-10, 1 case.
Louisiana: New Orleans, Feb. 3-10, 4 cases.
Maryland: Baltimore, Feb. 3-10, 6 cases.
Missouri: St. Louis, Feb. 3-10, 6 cases.
Ohio: Cincinnati, Feb. 2-9, 7 cases.
South Carolina: Georgetown, Feb. 15, 1 case (imported).
Tennessee: Memphis, Jan. 24-Feb. 7, 5 cases, 1 death.
Wisconsin: Appleton, Feb. 3-10, 1 case; La Crosse, 1 case.

SMALLPOX—FOREIGN.

Brazil: Pernambuco, Dec. 15-31, 39 deaths.
New Brunswick, Kings County, Feb. 4, present; Queen's County, present, Sunbury County, present, York County, present.
Canada: Toronto, Jan. 27-Feb. 3, 1 case.
China: Shanghai, Dec. 23-30, 1 death.
France: Paris, Jan. 27-Feb. 2, 13 cases, 2 deaths.
Gibraltar: Jan. 1-Feb. 4, 5 cases.
Greece: Athens, Jan. 8-15, 1 death.
India: Bombay, Jan. 9-16, 2 deaths; Calcutta, Dec. 30-Jan. 6, 61 deaths; Karachi, Jan. 7-14, 4 cases, 4 deaths; Madras, Jan. 6-12, 19 deaths; Rangoon, Dec. 30-Jan. 6, 10 deaths.
Italy: General, Jan. 18.25, 66 deaths.
Japan: Formosa, Dec. 1-31, 3 cases.
Russia: Moscow, Dec. 23-Jan. 13, 5 cases, 3 deaths; Odessa, Jan. 13-27, 38 cases, 4 deaths; St. Petersburg, Dec. 30-Jan. 20, 19 cases, 7 deaths.
Spain: Barcelona, Jan. 21-31, 7 deaths.

YELLOW FEVER—FOREIGN.

Cuba: Habana, Feb. 11, 1 case.
Honduras: El Paraiso, Jan. 19, 1 death.
Mexico: Merida, Jan. 28-Feb. 3, 2 cases, 2 deaths; Vera Cruz, Jan. 21-27, 2 cases, 2 deaths.
Nicaragua: Managua, Dec. 25-30, 1 death.

CHOLERA—FOREIGN.

India: Calcutta, Dec. 30-Jan. 6, 72 deaths; Madras, Jan. 6-12, 1 death; Rangoon, Dec. 30-Jan. 6, 3 deaths.
Russia: Government of Lomza, Jan. 4-14, 6 cases, 2 deaths; Government of Plock, Dec. 18-29, 21 cases, 13 deaths.

PLAGUE—INSULAR.

Hawaii: Kual, Feb. 13, 2 deaths.

PLAGUE—FOREIGN.

Africa: Mozambique, Nov. 19-Dec. 6, 3 deaths. Total to Dec. 6, 58 cases, 28 deaths.
India: Bombay, Jan. 9-16, 24 deaths; Calcutta, Dec. 30-Jan. 6, 25 deaths; Karachi, Jan. 7-14, 9 cases, 8 deaths; Madras, Jan. 6-12, 1 death; Rangoon, Dec. 30-Jan. 6, 30 deaths.
Japan: Formosa, Dec. 1-31, 12 deaths; Kagawa Ken, to Jan. 10, 2 cases; Kobe, 94 cases, Nara Ken, 2 cases; Osaka, 140 cases; Yamaguchi (Shimonoseki) 8 cases, 1 death.
Mauritius: Dec. 14-28, 7 cases, 5 deaths.
Persia: Seistan, Jan. 18, 200 deaths.

Book Notices

INFANTILE MORTALITY AND INFANTS' MILK DEPOT. By G. F. McCleary, M.D., D.P.H., Medical Officer of Health of the Metropolitan Borough of Battersea. Cloth. Pp. 135. Price, 6 shillings net. London: P. S. King & Son, 1905.

This book deals with the problem of infant mortality and the measures taken to reduce it in various countries, in France, England and the United States. Attention is called at the outset to the declining birth rate, both in England itself and in some of the colonies, especially Australia. It is a declining fertility which has evidently stimulated McCleary to write the book. He points out the urgent necessity of reducing the high mortality among infants in order to offset the low birth rate, and in discussing the causes of this high mortality gives the chief place to improper feeding. To correct this he lays down two general principles: First, a more general encouragement of breast feeding, and, second, where this is impossible the provision of a pure, properly prepared cow's milk. The elaboration of these two principles constitutes the bulk of the book, and while throughout due emphasis is laid on the superiority of breast feeding, McCleary concerns himself mainly with a discussion of the methods in vogue to attain the second, i. e., the supply of a pure substitute food. This resolves itself into a detailed account of the now well-known "milk laboratories," "stations" or "depots" as they are conducted in different countries.

Two institutions in France are first described: the *Consultation de Nourrissons* and the *Goutte de Lait*. The former has for its chief object the encouragement of breast feeding, food and money prizes being awarded to nursing mothers whose infants make satisfactory progress, the mothers with their infants reporting at stated intervals to a dispensary or hospital. As a natural development from this institution arose the *Goutte de Lait*, the purpose of which is the provision of a pure milk, whole or modified, to such infants as have been deprived of their natural food supply. Rigid medical oversight of the infants is maintained in both of these organizations; if they do not report regularly the milk is stopped.

The American laboratories are next described, the Strauss stations in New York being taken as a type. Lastly, the English "depots" are described much in detail. McCleary considers these various institutions in the order in which he apparently thinks they have been established, but makes no mention of the first one of the kind ever started, that in Boston in the summer of 1890 under the direct supervision of Rotch. The first *Goutte de Lait* is reported as being established in Paris in 1892, the first "depot" in England in 1899. The wide distribution of these stations is evidenced from the list given, showing their establishment throughout England, in Europe, North and South America. Most of the English "depots" are under municipal control, all in America under private control except the one at Rochester, which is a municipal organization. This is mentioned in high terms by Dr. McCleary as being superior to any similar "depot" in England. One of the best features of this laboratory, by the way, is the modifying which is done at the farm in the country. The importance of the farm and dairy end of the milk problem is duly emphasized throughout the book.

The work as a whole is an extremely interesting account of the world-wide movement for a better and purer milk for infants, a movement arising in France and England from a contemplation of the declining birth rate and the consequently greater necessity of preserving the infants actually born, and arising in the United States from humanitarian motives, pure and simple. It is of interest mainly, however, to health officials and to those pediatricians actively engaged in obtaining for city infants a supply of pure milk. It is of no help to a physician in solving the problem of a given case of difficult feeding. No details are given. To those familiar with the methods in vogue in American cities there is nothing new in the book, and they will derive but little help in solving the problem of city milk. In this respect at least our confrères across the water have taken a leaf out of the Yankee book and adapted an American institution to their own municipal peculiarities.

A TEXT-BOOK OF THE DISEASES OF THE EAR, NOSE AND PHARYNX. By D. B. St. John Roosa, M.D., LL.D., and B. Douglass, M.D. Cloth. Pp. 621. Price, $3.00 net. New York: The MacMillan Co., 1905.

This volume contains over eighty pages devoted to the anatomy and a brief review of the physiology of the ear. The subject of foreign bodies in the ear is set forth very fully and in a most interesting manner. Eighty-two pages are devoted to the diseases of the nose, throat and nasopharynx, to which so many aural affections owe their origin. This section is fairly complete, although the student might desire somewhat fuller directions. Thus, speaking of cauterization of the turbinates, "a flat nasal electrode attached to a proper electric apparatus" is recommended. And when enlarged tonsils are present with adenoids the authors advise the removal of the tonsils before attacking the adenoids, but do not express any preference as to the method. Their reasons for dividing chronic non-suppurative inflammation of the middle ear into catarrhal and proliferous inflammation, and the diagnosis between both and diseases of the labyrinth by means of the tuning-fork, are elaborated. They protest against the tendency of some neurologists to call all cases in which vertigo is a symptom Ménière's disease, and would limit the term to disease of the labyrinth. Various radical operations, including Roosa's, for mastoid disease are described in detail. A chapter on deaf-mutism, with suggestions for the mechanical relief of deafness, closes the volume. There are 108 cuts illustrating the text, but in a few cases the letters referred to in the legends are lacking. The text is generally clear and the diction good. We find a few long, involved sentences, such as the second paragraph on page 340. A few grammatical and rather numerous typographical errors will no doubt be corrected in subsequent editions. The book may be recommended as a safe guide.

THE PATHOLOGY OF THE EYE. By J. H. Parsons, B.S., D.Sc. Vol. II. Histology.—Part II. Cloth. Pp. 770. Price, $3.50. New York: G. P. Putnam's Sons, 1905.

In the second volume of this elaborate work Mr. Parsons has placed the science of medicine in general and that of ophthalmology in particular under a deep obligation. He reviews and profusely illustrates the histology of the crystalline lens, the vitreous, choroid, retina, optic nerve, orbit and the lacrimal apparatus. It must be borne in mind that the histology spoken of refers not only to normal conditions but to pathologic ones, so that this work is practically a textbook dealing with abnormal conditions generally found in the structures mentioned. Probably the most valuable portion of the work is that touching the various tumors of the eye, and we know of no monograph on the subject that compares with it in a practical demonstration of the changes found in this class of tissue alteration. Although the micro-photographs and illustrations generally are no better in quality than those seen in other books of the kind, they serve their purpose very well, and even when only diagrammatic, are useful. We especially commend the index of illustrations and think that many other writers might well take a leaf from Mr. Parsons' monograph in this particular. Space does not permit a reference to the many important original observations of the author, but we can not refrain from drawing the reader's attention to the elaborate descriptions of choroidal changes, especially of the neoplasms, that affect that membrane. We are certain that the work will long stand as an important contribution to the pathology as well as to the normal histology of the eye.

A SYSTEM OF MEDICINE. By Many Writers. Edited by T. C. Allbutt and H. D. Rolleston. New Edition. Revised Throughout with Additions. Vol. I. Cloth. Pp. 1209. Price, $5.00. New York: The MacMillan Co., 1905.

This is the first volume of the second edition of this system. It is the intention of the authors to revise and bring out one volume a year, each new volume corresponding to one of the first edition, so that the original edition will gradually be superseded by the new. Besides the prolegomena, Volume I contains some of the acute affections, such as erysipelas, influenza, diphtheria, infective endocarditis, cerebrospinal fever and enteric fever. Cholera and plague have been transferred to the tropical medicine section. The first article, on the history of medicine, is a new contribution by Allbutt. The article on medical statistics has been rewritten entirely. The arrangement of the article on dietetics has been altered somewhat, and

this chapter also contains a section on the physiologic principles of dietetics. New articles on exercise in the treatment of disease and on *x*-rays are added. The chapter on the clinical examination of the blood and its significance is contained in this volume, while the article on ærotherapeutics has been transferred to another volume. Among other things discussed in Volume I are climate in the treatment of disease, massage, hydrotherapy, the hygiene of youth, principles of drug therapeutics, old age, life insurance, inflammation, fever, the general pathology of nutrition and of new growths, and nursing.

BACTERIOLOGY OF PERITONITIS. By L. S. Dudgeon, M.R.C.P., and P. W. G. Sargent, M.A., M.B., B.C., F.R.C.S. Cloth. Pp. 243. Price, $2.50 net. Chicago: W. T. Keener & Co. 1905.

The authors state that they have attempted to place the bacteriology of acute peritonitis on a sound basis, and to deduce from the knowledge thus gained some facts which may serve to guide the surgeon in the treatment of the various diseases which are grouped under the names of septic or suppurative peritonitis. The relationship of the various affections of the contents of the abdomen to peritonitis are discussed at great length, and the rôle of the phagocytes in peritonitis also receives considerable attention. Speaking of the treatment of this condition, the authors state that the question between local irrigation and dry sponging, carried out with gentleness, is better than irrigation. The question of drainage, drug and serum treatment are discussed briefly. The authors believe that in the large majority of cases of acute peritonitis it is the colon bacillus which kills the patient. The only serum, therefore, which would be of value in helping to diminish the mortality of peritonitis is a multivalent anti-coli serum. The indiscriminate use of antitoxic sera is condemned as being both useless and unscientific.

PATHOGENIC MICRO-ORGANISMS INCLUDING BACTERIA AND PROTOZOA. A Practical Manual for Students, Physicians and Health Officers. By W. H. Park, M.D., assisted by A. W. Williams, M.D. Second Edition, Enlarged and Revised. 165 illustrations. Cloth. Pp. 556. Price, $3.75. New York: Lea Brothers & Co., 1905.

The most notable feature of this edition is the part devoted to the protozoa. Hitherto textbooks on bacteriology have failed to recognize the importance of animal organisms in the causation of disease. Obviously it is advisable that these organisms should be discussed together with the vegetable organisms. Sixty pages are devoted to the discussion of the ameba, trypanosomes, the spirochetes of relapsing fever and syphilis, the malarial organisms and the protozoan-like bodies found in smallpox and allied diseases. In the appendix the author discusses the aggressins, the hemolysins, the diplobacillus of Morax-Axenfeld and the relation of the stegomyia to yellow fever. The part on bacteria also has been revised carefully, thus making the work a valuable summary of the present-day knowledge in this field of medicine.

A TEXT-BOOK ON THE PRACTICE OF GYNECOLOGY. For Practitioners and Students. By W. Easterly Ashton, M.D., LL.D., Professor of Gynecology in the Medico-Chirurgical College of Philadelphia. Octavo. 1,079 pages, with 1,046 Original Line Drawings. Price, $6.50 net. Philadelphia: W. B. Saunders & Company, 1905.

Ashton appreciates that the average young practitioner has received only most superficial information regarding the technic of gynecologic operating and the diagnosis of diseases of women. He therefore takes up clearly and succinctly each step of each procedure, so that it is impossible to misunderstand his meaning. In place of the routine practice of devoting a general chapter or chapters to physical examination the author details the method of examinations of each organ before considering its diseases. More than a thousand illustrations are shown, none of which is old or hackneyed; all are new line drawings made from apparatus, living models, the cadaver or the descriptions of operations by other operators. The book will be found decidedly practical.

THE SURGEON-GENERALS OF THE ARMY OF THE UNITED STATES OF AMERICA. A Series of Biographical Sketches of the Senior Officers of the Military Medical Service from the American Revolution to the Philippine Pacification. By James Evelyn Pilcher, M.D., Ph.D., LL.D., Major and Surg. U. S. V.; Cap., Ret., U. S. A.; Secretary of the Association of Military Surgeons, and Editor of the *Journal of the Association of Military Surgeons of the United States*. 8vo. Cloth. Pp. 114. Carlisle, Pennsylvania, The Association of Military Surgeons, 1905.

In addition to well written and comprehensive articles on the surgeon-generals of the United States Army, Major Pilcher has given us in this book biographic notices, with portraits, of Samuel Preston Moore, surgeon-general of the Confederate Army; of James McHenry and William Eustis, military surgeons who became secretaries of war, and of Benjamin Rush, the whole constituting a volume of interest not alone to the military medical officers but to the profession at large. All interested in the lives and achievements of medical men who have helped in the making of the history of this country will find recreative reading in this book.

DOSE-BOOK AND MANUAL OF PRESCRIPTION-WRITING, with a List of Official Drugs and Preparations and Many of the Newer Remedies with Their Doses. By E. Q. Thornton, M.D., Ph.G. Third Edition. Revised and Enlarged and Adapted to the Eighth Revision (1905) of the United States Pharmacopeia. Flexible Leather. Pp. 392. Price, $2.00 net. Philadelphia: W. B. Saunders & Co., 1905.

This book is of value to the student as a guide to the proper construction of the prescription. It includes directions for converting the apothecary weights into the metric system, and vice versa. That part devoted to prescription writing and incompatibilities is of especial value. The appendix includes a list of the common poisons and methods of treatment of poisoning. This edition also contains a list of the drugs with their doses arranged in accordance with the recent changes established by the new Pharmacopeia.

MASSAGE AND THE ORIGINAL SWEDISH MOVEMENTS, their Application to Various Diseases of the Body. By K. W. Ostrom. Sixth edition, revised and enlarged, with 115 illustrations. Cloth. Pp. 184. Price, $1.00. Philadelphia: P. Blakiston's Son & Co., 1905.

The physician's knowledge of the general methods of massage, together with his familiarity with anatomy and physiology, enable him to work out the details of mechanical treatment, but he would far better have some such book as this by Ostrom as a guide. Details are given for massage of all portions of the body and the illustrations make it easy to understand the directions. This sixth edition has been thoroughly revised and a number of new portions added. The physician who is not using any of these methods in his treatment is omitting a valuable part of the therapy that is open to him.

A TEXT-BOOK OF LEGAL MEDICINE. By Frank Winthrop Draper, A.M., M.D., Professor of Legal Medicine in Harvard University. Fully Illustrated. Cloth. Pp. 573. Price, $4.00 net. Philadelphia: W. B. Saunders & Co., 1905.

Draper writes with the inspiration of his own realization of the importance of the subject. He urges on the medical student careful study, because of the likelihood of medicolegal complications in the first case undertaken in his practice. Draper feels that not enough attention is paid to this subject in medical colleges. The reader finds in this book the sympathy of a man of wide experience and most practical ways of viewing things. The book has been carefully kept within reasonable limits, and except for the departments of toxicology and psychiatry will be found a full text-book on medicolegal affairs.

LEHMANN'S MEDIZINISCHE ATLANTEN. Band V. Atlas Typischer Röntgenbilder vom normalen Menschen. By Dr. med. Rudolf Grashey. Mit 97 tafelbildern (Autotypien) in Originalgrösse und 42 Konturzeichnungen (davon 11 als Uederdruck), ferner 14 schematischen Figuren im Einleitungstext. Cloth. Pp. 92. Price, $4.00. Munich: J. H. Lehmann's Verlag. New York: P. B. Hoeber.

This atlas consists of 97 reproductions of radiographs of the various parts of the body, particularly of joints, which are likely to be injured by a trauma and in which the diagnosis may be subject to doubt. Each illustration is accompanied by a suitable explanatory text. The book also contains 42 outline drawings and 14 diagrammatic sketches. The radiographs are excellent and the work can not fail to elicit the appreciation of those who are interested in roentgenology.

VITAL QUESTIONS. By H. D. Chapin, M.D. Cloth. Pp. 189. Price, by mail, $1.10. New York: T. Y. Crowell & Co.

The title of this volume may be amplified by saying that the work discusses the fundamental problems of the physician's life and activity. Some of the "Vital Questions," as subdivided by chapters, are: "Unequality—the Question of Opportunity"; "The Unfit—the Question of Survival"; "Poverty—the Question of Subsistence"; "Success—the Question of Achievement"; "Death—the Final Question," etc. The entrance of the physician into politics, into work for social betterment, into medical society work, etc., is due to his thought on these same problems which Chapin discusses. This book will stimulate the endeavor to be of service to humanity.

SPEMANNS HISTORISCHER MEDICINAL-KALENDAR, bearbeitet von Prof. Dr. J. Pagel und Prof. Dr. J. Schwalbe in Berlin. Paper. Pp. 184. Price 75c. Munich: J. F. Lehmann's Verlag. New York: P. B. Hoeber.

This calendar is in the form of a tablet, each leaf of which represents two days of the year. At the head of each page is a reproduction either of a famous painting dealing with some medical subject or of some well-known caricature drawing or the portrait of a medical celebrity. Besides this, under each date are noted one or more occurrences of importance in medicine, the announcement of the birth or death of a man prominent in research work and in practice, and pertinent aphorisms. Many astronomical data are also recorded.

SKIASCOPY AND ITS PRACTICAL APPLICATION TO THE STUDY OF REFRACTION. By E. Jackson, A.M., M.D. Fourth Edition. Revised and Enlarged, with 28 illustrations. Cloth. Pp. 117. Denver: Herrick Book and Stationery Co., 1905.

With a view to making this little treatise more complete, Jackson has added two chapters, one on exact skiascopy and the other on auto-skiascopy. In the first chapter are discussed the procedures necessary to render skiascopy valuable, such as the dark room, the source of light, mirror, etc. In the second chapter the reader is instructed how to measure his own refraction by the use of an ordinary looking-glass, in addition to the apparatus commonly employed for the test.

MATERIA MEDICA AND THERAPEUTICS. An Introduction to the Rational Treatment of Disease. By J. M. Bruce. New and Enlarged Edition. Cloth. Pp. 632. Price, $1.75 net. Chicago: W. T. Keener, 1905.

A change, which the author believes will be regarded as an improvement, is the introduction of greater detail respecting the chemical and pharmaceutical relations of the individual drugs. An entirely new part has also been added, containing an account of the materia medica and therapeutics of the drugs mentioned in the Indian and Colonial Addendum to the British Pharmacopeia.

READY REFERENCE HANDBOOK OF DISEASES OF THE SKIN. G. T. Jackson, M.D. 91 illustrations and 3 plates. Fifth edition. Cloth. Pp. 676. Price, $2.75 net. Philadelphia: Lea Brothers & Co., 1905.

The present edition is considerably larger than the preceding one because of the addition of new sections on affections of the skin recently recognized. As heretofore, the symptoms, diagnosis and treatment are especially considered, and the alphabetical arrangement of the diseases, a feature which has made this work popular, is preserved. Many new prescriptions have been added to the appendix.

A MANUAL OF BACTERIOLOGY. By H. U. Williams, M.D. Revised by B. M. Bolton, M.D., 108 illustrations. Fourth Edition, Revised and Enlarged. Cloth. Pp. 357. Paper, $1.75. Philadelphia: P. Blakiston's Son & Co., 1905.

This edition maintains the characteristic features of previous editions, but contains many additions, especially in the chapters on bacterial poisons and on immunity. The appendix is devoted to a consideration of several pathogenic protozoa, the *Ameba dysenteriæ*, the *Plasmodium malariæ*, trypanosomes and organisms found in smallpox and vacinia.

PHYSICAL DIAGNOSIS, Including Diseases of the Thoracic and Abdominal Organs. A Manual for Students and Physicians. By F. Le Fevre, M.D. Second Edition. Revised and Enlarged. Cloth. Pp. 479. Price, $2.25 net. Philadelphia: Lea Brothers & Co., 1905.

Among the new features of this edition are the very complete revision of the chapter on topographic and rational anatomy and the many new illustrations, including a number of radiographs of diseases of the heart and aorta. Such revisions as were necessary to bring the work up to date have been made.

OIL WELLS IN THE WOODS. By J. C. O'Day, M.D. With Illustrations by Miss Ethel Farmer, and Photographs Collected by the Author. Cloth. Pp. 359. Deposit, N. Y.: The Oquaga Press, 1905.

Dr. O'Day has written a tale that is interesting, but which is not notable for literary merit. The love story is woven about scenes in the oil wells of Pennsylvania, and its decided local flavor gives evidence of the author's intimate knowledge of the oil fields.

Catatonia.—Mouratoff after a critical study of this type of mental ailment and of its literature concludes that it is entitled to be considered rather as a morbid species by itself, with a somewhat definite though varied symptomatology, but with one symptom always constant, and a generally constant termination in dementia.

Miscellany

Graft.—Not many years since, a half-page advertisement of a sanitarium appeared in a well-known medical journal, offering stock of the sanitarium company on very advantageous terms to doctors sending patients to that institution. It did not lessen the insult of this intimation to learn that the leading spirit of the sanitarium company was a fellow of a learned medical organization of this state. A certain mineral springs company has recently, it is said, offered its stock to physicians, so as to induce them to advocate the use of its waters to their patients. Who does not know that in this city some opticians give, and some oculists shamefully accept, commissions on sales made to patients? The public should realize that an oculist, who insists on his patients buying their glasses at one or two special stores, lays himself open to the suspicion of being bribed to do so by a commission from the dealer. The same suspicion attaches to the doctor who unduly urges patients to buy medicines from one apothecary. It is true that spectacles and medicines should be accurately made and compounded; but there are usually too many reliable dealers, especially in large cities, to necessitate so restricted a choice for the mere benefit of the patient. Another scheme, to impose on the patient and extract from him what is practically two fees, consists in giving him a prescription for medicine under a special name, agreed on by the doctor and the druggist with whom he is in collusion. The patient is then obliged to go to the apothecary mentioned by the doctor, even if it be several miles out of his way, under the impression forsooth that no other apothecary prepares the remedy so carefully. This business enterprise is not unlike that practiced by some hospitals, which, to obtain a large and interesting accident service, keep beer and whisky ready for the men running the patrol wagon. Little wonder is it that the injured are at times driven many unnecessary squares and that certain institutions can show an unusually long list of accident cases. Whether these institutions similarly profit by using their private wards and rooms as boarding houses for members of state legislatures and their friends, who visit the centers of gayety for pleasure or business, need not be discussed in this paper.—J. B. Roberts.

The Logical Basis of the Sanitary Policy of Mosquito Reduction.—Sir Donald Ross, in *Science* (vol. xxi, No. 570, page 689, Dec. 1, 1905), said that the life of gnats, like that of other animals, is governed by fixed laws. Local reduction, that is, artificial reduction of the density of population, practically resolves itself into (a) direct destruction, and (b) artificial creation of unfavorable conditions. Suppose a box containing a million gnats were to be opened in the center of a large plain, and that the insects were allowed to wander freely in all directions. During the first minute most of the insects would fly toward every point of the compass. At the end of a minute a few might fly straight on and a few straight backward, while the rest would travel at various angles to the right or left. At the end of the second minute the same thing would occur. At last, after their death, it would be found that an extremely small proportion of the insects had moved continuously in one direction; and that the majority of them had wandered more or less backward and forward and had died in the vicinity of the pool or box from which they originally came. The law determining the behavior of these insects may be called the centripetal law of random wandering. It ordains that when living units wander from a given point, guided only by chance, they always tend to revert to that point. Mosquitoes guided either by chance or by search for food are not likely to wander continuously in one direction. They will always tend to persecute most those houses which lie in the immediate vicinity of their breeding pool. This is not understood by many who think that mosquitoes radiate as rays of light from a center, and argue that, therefore, it is useless to drain local breeding pools because of the influx of mosquitoes from without. Such an influx certainly exists, but it can not generally compensate for local destruction. Consider a tract of country over which numbers of mosquito-breeding pools are scattered, with houses and other feeding places lying among them. Drain away all

the pools to the right of a straight line drawn across this country, leaving all those to the left of it intact. How many mosquitoes will there now be on the right side, compared with those on the left side? We suppose that, before the drainage was effected, mosquitoes were then breeding fairly uniformly over the whole country; that there was a certain amount of migration across the line, both ways; and since the density was equal on both sides, this migration must also have been equal and opposite—that is, as many emigrants must have been constantly passing from right to left as from left to right. After drainage the following changes would occur: The insects breed as before on the left side of the line, and some continue as before to cross over into the drained country; but in the latter, on the right of the line, propagation is entirely checked and the migration from it to the left of the line now ceases. Hence, not only must there be a decrease of mosquito density on the right side of the line, but also a decrease on the left of the line—that is to say, the drainage has affected the mosquito density not only up to the line of demarcation, but beyond it. And moreover, since the migration was formerly equal from both sides of the line, the mosquitoes gained by immigration into the drained country must be exactly lost by the undrained country. The number of immigrants, therefore, into any area of operations must, for practical purposes, be very small or inappreciable a short distance within the boundary line. The effect of wind requires examination. With a wind blowing continuously from one direction, the indication would be to extend the drainage further in that direction. Obviously, wind may scatter mosquitoes, but it can not create them nor prevent the total average reduction due to anti-propagation measures, as some people seem to think. It is, however, very doubtful whether wind does drive or scatter mosquitoes to any great degree; they are extremely tenacious of locality. The statement is often made that mosquitoes are brought into towns in trains, carts and cabs. The number introduced in this manner must always be infinitesimal compared with those that fly in or which are bred in the town itself. Moreover, if vehicles bring them in they may also take them out. In conclusion, as a general rule for practical purposes, if the area of operations be of any considerable size, immigration will not very materially affect the result.

The Proper View to Take in Organization.—We can accomplish nothing outside of co-operative and organized work; and though we fail to realize all we hope for, we can attain much that will improve our present condition. Is it not childish for us to permit personal prejudices and predilections as to methods and men turn us aside from the attainment of this power we so plainly need? All great accomplishments demand the sacrifice of the smaller things f - the greater in view; and if we could serve best the great profession to which we belong, and the present generation and those to come who look to us with hope and confidence, we must follow this rule that obtains in all great enterprises. Let us not be too ready to criticise methods and men; we ourselves are fallible. The future will work out many problems that perplex us now; and under broader and more intelligent views the needs will be met and the bad in men and methods will be thrown aside. The more strongly and heartily we combine now for this great object, forgetting the little differences that must come up, the sooner will we accomplish this great purpose. The profession of medicine will rise to a higher plane of proficiency and will occupy a higher place in the esteem of the people.—B. F. Eager, in *Kentucky State Medical Association Bulletin.*

The Right to Use Any Beneficial Method.—The right to select remedies and methods with absolute freedom is so generally recognized by all the so-called schools that sects are sects now only in name. Surgery is alike in all; dietetics and nursing know no school. Homeopathy no longer pretends to administer infinitesimal doses of inversely potentialized medicines, expecting them to produce symptoms like those of the disease treated; eclectics no longer assume to have a monopoly of wisdom in the selection of therapeutic remedies, and physiomedicals can boast of no useful information that may not be known by all. Then why should we not have a united profession? Many believe that we may have an undivided profession and have declared in favor of union by the simple abandonment of sectarian names. These designations have lost their original meaning, and are retained presumably for some supposed advantage in the proclamation which they make to the public. The constitution of the reorganized state and county societies wisely provides that any reputable physician who will agree to practice nonsectarian medicine shall be eligible to membership in these societies and thereby in the American Medical Association. This has raised the question as to what is implied in the practice of nonsectarian medicine. It is the practice of medicine and surgery without proclaiming to the public that such practice is based on any exclusive method or system. Truth as one sees it is to be the light, judgment as now to be the guide. The only restriction being that one is to refrain from using a sectarian designation which at best serves only to hold out a claim to the public that one has some remedy or method not possessed by our confrères.—*Columbus Medical Journal.*

The Extensor Digitorum Communis Reflex.—A. Morselli (*Rivista di Patologia nervosa e mentale*), has studied this reflex in various pathologic conditions and concludes that it is a phenomenon of muscular reaction dependent on the tone and trophic condition of the nervous centers. It is constantly present in normal individuals and is induced by percussion of certain points near the humeral condyles and on the forearm and appears in the form of extension of the fingers and the hand. It may not be present in children under 3 years and is dulled in old age. In pathologic conditions it may be exaggerated, weakened or abolished. In some nervous affections the intensity of this reflex may be a differentiating symptom, as, for example, between tabes and pseudo-tabes from alcohol, and between traumatic and alcoholic neuritis, since in the toxic forms the muscular reaction is torpid or feeble while in the others it is exaggerated. In hysteria and hystero-epileptic conditions it may be exaggerated while in epileptic states and in some neurasthenics it is weakened and finally abolished. In alcoholic and morphinic insanity the reflex is torpid while on the other hand in dementia præcox, in paresis and in mania it seems to be exaggerated.

Quacks in Turkey.—The Constantinople correspondent of the *Lancet* states that in Turkey quacks of all kinds flourish. He reports that the Turkish physician, Dr. Nouri Effendi, recently made a tour in the provinces and reported a deplorable state of affairs occasioned by the utter ignorance of the population and the inability to meet the difficulties arising out of different contagious maladies. The people never attach any importance to the first manifestations of the disease, but in later stages they call in all sorts of persons professing to be well versed in occult sciences. These persons attribute every malady to an evil eye. Their routine treatment is to administer a potion of water into which melted lead has been dropped, the draught to be taken during the recital of an incantation. The shapes assumed by the lead dropping into the water are pointed out to have various, generally menacing, significances. Other quacks prescribe a diet which has to be adhered to for 70 days and which consists of dry bread without salt. If the condition disappears the skill of the quack is praised. If the disease persists then it is due to the unhappy star of the patient's destiny. Dr. Nouri Effendi declared also that in consequence of such quackery and ignorance preventable and curable maladies are propagated with disastrous results.

Poisoning of a Child by Strychnin Tablets.—Dr. Vinnedge reports in the *Lancet-Clinic*, May 6, 1905, an instructive case indicating the necessity of care in dispensing medicine. A physician left nine red tablets, each containing 1/60 of a grain of strychnin, on a table in a bedroom by a patient, with instructions for their use. The patient, not being confined to bed, left the room some time later, and on her return saw that the pills which had not yet been taken had disappeared. She found that one of the children had swallowed them. The child died. The attending physician, in his sworn statement before the coroner, said that as he went into the house he noticed the children playing in the front room. In spite of this, the dan-

ger of leaving the tablets loose on the table apparently did not occur to him. Dr. Vinnedge, who reports the case with the consent of the attending physician for the sake of the warning it contains, quotes from the law of Indiana on the subject, from which it appears that the only restraint and guide the physician has is his reasonable care and diligence." The lesson is obvious that no tablets which would even be harmful to children, should be dispensed in the manner spoken of.

Value of **Discussions at Society Meetings.**—I must admit that many of these long, so-called original papers I pass over, and simply read the discussions on them. The discussions generally contain the meat of the nut. They cover the ground in a condensed and concise manner. We can in this way obtain a knowledge of the papers read by reading a few words in place of reading a great many. Discussions of papers are usually limited to five minutes. A great deal can be said in five minutes, provided the one speaking confines himself closely to the subject matter. But when he speaks one-half of the time in complimenting the speaker, then some time in excuses, he can not say very much in the two minutes remaining. I think it would be well if the complimentary part was understood, and that no excuse or apologies were made, but let the five minutes be used in actual discussion of the papers.—George J. Munroe, in *Cincinnati Lancet-Clinic.*

Floating Hospital in Northern Africa.—It is reported that the Presbyterian Board of Foreign Missions has established a floating hospital on one of the tributaries of the Nile. In this way medical aid will be given to natives along the shores who suffer from pulmonary and eye diseases. The hospital boat will be equipped with all modern appliances for the treatment of trachoma and other eye diseases, and will make two trips each month from the mouth of the Sohat, a tributary of the Nile, to its source. The boat is named in memory of James A. Elliott.

State Boards of Registration

COMING EXAMINATIONS.

MAINE State Board of Registration of Medicine, City Building, Portland, March 13. Secretary, Wm. J. Maybury, Saco.

CONNECTICUT Medical Examining Board, City Hall, New Haven, March 13-14. Secretary, Charles A. Tuttle, New Haven.

MASSACHUSETTS Board of Registration in Medicine, State House, Boston, March 13-14. Secretary, Edwin B. Harvey, Boston.

Minnesota January Report.—Dr. O. E. Linjer, of the Minnesota State Board of Medical Examiners, reports the written examination held in St. Paul, Jan. 2-4, 1906. The number of subjects examined in was 12; total number of questions asked, 95; percentage required to pass, 75. The total number of applicants examined was 27, of whom 19 passed and 8 failed. The following colleges were represented:

College.	Year Grad.	Per Cent.
PASSED.		
Queen's University, Ontario	(1896) 77.1; (1901) 77.5; (1903)	81.4
Columbia University, New York	(1905)	85.1
Barnes Med. Coll.	(1905)	76.5
University of Minnesota	(1905) 75, 77.7, 83.5,	83.7
University of Illinois	(1905)	78.7
McGill University	(1902)	88.7
Jefferson Med. Coll.	(1905)	77.9
Hahnemann Med. Coll., Chicago	(1905)	77.6
Harvard University	(1886)	85.5
University of Pennsylvania	(1905)	81.7
Laval University, Quebec	(1899)	78.3
Northwestern University	(1905)	85.8
University of Leipzig, Germany	(1893)	80.1
University of Michigan, Homeo. Dept.	(1904)	85.3
FAILED.		
Omaha Med. Coll.	(1902)	69.9
Jefferson Med. Coll.	(1897)	74
Hamline University	(1904) 63.8; (1905) 70.9,	*75.1
University of Minnesota	(1905)	73
Laval University, Quebec	(1902)	72.2
Rush Med. Coll.	(1902)	68.9

* Low mark in the important branches.

New Requirements in Nebraska.—The following resolution, effective July 1, 1906, has been adopted by the Nebraska State Board of Health: "Resolved, That applicants for a license to practice medicine in the state of Nebraska shall present to the board of examiners evidence of having university or college degree or a high school diploma of college entrance standard or in lieu thereof applicant must pass a satisfactory examination before the state superintendent of public instruction."

South Dakota January Report.—Dr. H. E. McNutt, secretary of the South Dakota Board of Medical Examiners, reports the written examination held at Sioux Falls, Jan. 10-11, 1906. The number of subjects examined in was 12; total number of questions asked, 90; percentage required to pass, 75. The total number of candidates examined was 12, of whom 11 passed and 1 failed. Twelve candidates were granted license by reciprocity. The following colleges were represented:

College.	Year Grad.	Per Cent.
PASSED.		
University of Nebraska	(1905)	81.6
University of Nashville	(1905)	75.0
American Coll. of Med. & Surg., Chicago	(1904)	78.7
University of Toronto	(1890)	83.7
Creighton Med. Coll.	(1905) 82.7, 83.4,	88.7
College of P. & S., Chicago	(1906) 77.9,	85.6
Lincoln Med. Coll.	(1906)	79.5
University of Iowa	(1903)	*78.2
FAILED.		
University of Vermont	(1899)	**72.3

* Reciprocity, with supplemental examination, 4 subjects. Failed on previous examination; this was his second examination.
** Third examination.

SURGERY.

1. What is the point of selection for resection of the ribs, and why? Name the conditions requiring, and the usual method of performing (a) thoracentesis, (b) resection of ribs. 2. A man falls from a chair in a saloon and receives a slight scalp wound. He goes to bed and is found, four hours later, in a state of coma. To what may the coma be due, and how would you treat the patient? 3. What are the symptoms of stone in the bladder? 4. What complication is apt to result from a fracture of the tibia and fibula immediately below the knee joint, with backward displacement of the proximal fragments? Treat the fracture. 5. Name the different varieties of urethral stricture, and describe the methods of treating them. 6. How would you treat a septic infection of an extremity? 7. State what you consider, giving your reasons, to be the most suitable suture material for (a) intestinal anastomosis, (b) uniting the peritoneum, (c) uniting the muscular layers of the abdominal wall, (d) closing the skin. 8. What general principles must be followed in treating fractures occurring at or near joints? 9. What is a sprained ankle? Give treatment. 10. What precautions should be observed in producing general anesthesia with (a) chloroform; (b) ether; and local anesthesia with cocain?

BACTERIOLOGY.

1. What bacteria are associated with inflammation and suppuration? 2. What are Koch's postulates? 3. Give in detail a method of staining for the tubercle bacillus. 4. Is the Widal reaction always conclusive? Describe the method of producing it. 5. To what uses in his ordinary work can a general practitioner put a microscope?

ANATOMY.

1. Describe the first, ninth, tenth and eleventh dorsal vertebræ. 2. Draw a diagram of and describe the ulna. 3. Mention the muscles of the forearm, and give origin and insertion of any two of them. 4. Describe Hesselbach's triangle. 5. Describe the internal iliac vein. 6. Give nerve and blood supply of the pancreas. 7. Describe the canal of Wirsung. 8. Describe the hepatic duct. 9. Describe the larynx. 10. Describe Meckel's ganglion.

DISEASES OF WOMEN.

1. Give cause, diagnosis and treatment of "erosion of the cervix." 2. Give differential treatment of extrauterine pregnancy and intraligamentary fibroma. 3. Give treatment of membranous dysmenorrhea. 4. Give diagnosis and treatment of gonorrhea. 5. Describe infantile uterus. Give treatment.

EYE AND EAR.

1. Define blepharitis, epiphora, photophobia, pterygium and hyperopia. 2. Sketch cross-section of eyeball in antero-posterior plane. Name and show relation of parts. 3. Define dacryocystitis. Give treatment of an acute case. 4. Outline treatment for ophthalmia neonatorum. Give preventive treatment. 5. Name symptoms which would justify a mastoid operation.

SKIN AND VENEREAL.

1. How would you treat a case of acute gonorrhea, and how would you positively diagnose gonococci microscopically? 2. Describe and treat lupus vulgaris. 3. Differentiate eczema and seborrhea of the scalp, and treat the last named. 4. Describe primary chancre. How would you treat a patient who has one? 5. Name four (4) contagious diseases that have diagnostic skin eruptions. Describe the eruptions of each.

PHYSIOLOGY.

1. Describe chyme and chyle. 2. Give the normal constituents, reaction and specific gravity of urine. 3. Whence do bones derive their nourishment? 4. Give the mechanism of respiration and its purpose. 5. Give examples of morbid reflex action. 6. Describe the temporary and permanent sets of teeth. 7. What are the functions of the lungs? Describe their action. 8. How is animal heat produced. 9. Describe the physiology of vision. 10. Name the active principles of the digestive secretions, and describe how each affects the food.

OBSTETRICS.

1. Describe the internal organs of generation and their anatomic relations, giving blood and nerve supply of each. 2. Describe a transverse presentation, giving diagnosis and your management of the same in a given case. 3. Give symptoms indicating death of child *in utero*. 4. Give usual relative time of the different stages of labor. 5. Give the indications of syphilis in the new-born child. 6. How would you manage a prolapsed funis? What are the dan-

gers? 7. Define uterine inertia, and give its immediate and remote significance. Give treatment. 8. Describe in full your management of the third stage of labor. 9. When would you use forceps with head in the upper strait? Describe manner of so using them. 10. Give causes of lacerated cervix, also time and manner of treatment.

GENERAL PATHOLOGY.

1. How should sputum be examined when tuberculous infection is suspected? 2. What is a giant cell? 3. What degenerative changes occur in arteries? 4. Give the causes of edema. 5. Where do we generally find myofibromata?

THERAPEUTICS AND REGULAR PRACTICE.

1. How do borax and boric acid differ chemically and therapeutically? 2. How would you use croton oil? 3. Describe the proper method of giving hypodermic injections. 4. What do you know of the uses and effects of scopolamin? 5. Mention a soluble and insoluble salt of lead, and tell how and for what purpose they are used in medicine. 6. Name one important complication, one sequel, and give ordinary age limit of typhoid fever. 7. How should apoplexy from cerebral hemorrhage be treated? 8. Define hysteria. 9. Differentiate abscess and cancer of liver. 10. What do you understand neurasthenia to be?

ECLECTIC MATERIA MEDICA, THERAPEUTICS AND PRACTICE.

1. In what pathologic conditions is camphor used? Give dose used internally. 2. Give some of the therapeutic uses of cuprum sulphate, also the doses. 3. Name and give dose of a hydragogue; also of a cholagogue. 4. Name some of the best remedies to control vomiting, and give dose of each. 5. For what is apomorphia used? Dose of same. 6. Give symptoms and treatment of a case of malarial fever. 7. Write a prescription for insomnia. 8. Give the dose of (a) nitroglycerin, (b) atropin, (c) potassium iodid. 9. Give symptoms and antidose in opium poisoning. 10. Give differential diagnosis between alcoholism and apoplexy.

CHEMISTRY.

1. What do you understand by chemical action? Give examples. 2. Distinguish between synthetic and analytic reactions. 3. What group of elements (radicals) is characteristic of all hydrates, carbonates, nitrates, sulphates? 4. What are alkaloids? Name the essential alkaloids of opium. 5. Give chemical name and formula of lunar caustic, caustic potash, fire damp. 6. Give a chemical test for pus and mucus in urine. 7. What sediments are soluble (a) when heated in supernatent urine, (b) with acetic acid, (c) with hydrochloric acid? 8. What causes hardness in well water? 9. What chemical is in ratsbane, rat cheese and poison fly paper? What are the best antidotes for poisoning by it, and how may the antidotes be most conveniently prepared? 10. What is lye chemically considered? What antidotes for poisoning by it?

HOMEOPATHIC THERAPEUTICS.

1. How do you treat pneumonia? Give remedies used in each stage. 2. Outline your treatment of membranous croup. Give indications for remedies used. 3. Name and give indications for three prominent remedies in the treatment of diarrhea. 4. Differentiate between belladonna, china, and secale in uterine hemorrhage. 5. Give characteristic symptoms calling for rhus in rheumatism; also in typhoid. 6. Name two remedies (giving indications for their use) in nervous affections. 7. Outline your treatment of puerpural eclampsia, giving dose and potency of remedies used. 8. Differentiate nux vom, lycopodium and ipecac in stomach troubles. 9. Describe a case fully in which you would use sulphur. 10. Differentiate arsenicum, hepar sulphur and silicia in pus affections.

MEDICAL JURISPRUDENCE.

1. What are the powers of the coroner? 2. Of what importance is the gaping of the wound? 3. What are the postmortem appearances peculiar to death by apnea? 4. Differentiate rigor mortis from the rigidity of hysteria, catalepsy. 5. When called as a medical witness, (a) must a physician obey the summons of the court? (b) must he be satisfied with the fee of an ordinary witness? or (c) when may he charge more for his services? and (d) why?

Virginia December Report.—Dr. R. S. Martin, secretary of the Medical Examining Board of Virginia, reports the written and oral examination held at Richmond, Dec. 12-15, 1905. The percentage required to pass was 75. The total number of candidates examined was 125, of whom 40 passed, including 6 who were licensed by reciprocity; 17 failed. Sixty-seven undergraduates took a partial examination. One candidate handed in no paper. The following colleges were represented:

PASSED. College.	Year Grad.	Per Cent.
Hospital Coll. of Med.	(1903) 78; (1905)	76
University of Virginia	(1887) 95; (1900) 86; (1901) 86; (1904) 78, 80, 82, 85; (1905) 79.	
College of P. and S., New York	(1883)	75
Pulte Med. Coll.	(1905)	75
Leonard Med. Coll.	(1904) 75, 75; (1905)	76
Columbian University	(1891)	80
Medical College of Virginia	(1905) 75, 76,	77
Medical College of Ohio	(1867)	75
University of Pennsylvania	(1902) 86; (1903)	85
University Coll. of Med.	(1894) 80; (1905) 76, 76,	79
National University, Washington	(1903)	81
Detroit Homeo. Med. Coll.	(1872)	75
University of Maryland	(1905)	77
George Washington University	(1886) 75; (1905)	85
Maryland Med. Coll.	(1905)	75
Tennessee Med. Coll.	(1898)	76
Vanderbilt University	(1899)	85

LICENSED BY RECIPROCITY.

Woman's Med. Coll., Baltimore	(1905)
Columbian University	(1899)
University of Maryland (2 candidates)	(1905)
Johns Hopkins University	(1905)
Maryland Med. Coll.	(1905)

FAILED.

University of Maryland	(1903) 67
University of the South	(1904) 50; (1905) 74
Howard Med. Coll.	(1904) 74
Leonard Med. Coll.	(1904) 73, 73, 73; (1905) 73
University of Virginia	(1904) 74
Medical College of Virginia	(1905) 71, 73, 74
Medico-Chirurgical College, Philadelphia	(1904) 67
Hospital Coll. of Med.	(1904) 60; (1905) 33
Maryland Med. Coll.	(1904) 67
Baltimore Med. Coll.	(1905) 69

Wyoming January Report.—Dr. S. B. Miller, secretary of the State Board of Medical Examiners, reports the written examination held at Laramie, Jan. 17, 1906. The number of subjects examined in was 11; total number of questions asked, 110; percentage required to pass, 75. One candidate was examined and passed.

PASSED. College.	Year Grad.	Per Cent.
Jefferson Med. Coll.	(1891)	85.9

Medical Organization

What Can the County Society Do?

XII. STOP TESTIMONIAL GIVING.

At one of the "business" meetings during the year the subject of discussion may with great profit be "testimonials." Starting with the text that the giving of testimonials for any article employed therapeutically is reprehensible, the subject in its various aspects can be freely discussed. Every effort should be made to utilize the occcasion to secure an agreement among all the doctors in the county that no testimonials whatever will hereafter be given. An appropriate proceeding would be, after proper notice, to bring the subject up in the form of a resolution declaring the society's adhesion to the pronouncement on this subject of the "Principles of Ethics" of the American Medical Association. Possibly in some societies this might best be done at the same meeting at which there is full consideration of the proprietary medicine evil.

XIII. EXPOSE SWINDLING.

At an early meeting to which some of the laity are invited the two articles by Mark Sullivan in the *Ladies' Home Journal* for January, 1906, should be read and submitted for general discussion. The revelations of swindling in the patent-medicine traffic are therein so dramatically and so convincingly laid bare that much good to the community is sure to follow their general public discussion. As before observed, the joint meeting with the laity is one of the very best methods of popular instruction in matters pertaining to the public health. Every county society can readily adopt the method, and these timely topics of discussion furnish admirable opportunity to arouse public interest in the establishment of the custom.

Businesslike Methods Desirable

The conscientious physician must have due regard for the commercial side of his profession, because a poor physician, one who can not provide himself with the proper and necessary equipment, one who can not keep in touch with medical progress, is a dangerous man; and in order to equip himself properly and to keep abreast of the times he must make a satisfactory income. He should keep his accounts accurately and see that his bills are rendered promptly and every effort made to collect them, save in cases of destitution. People in general have more respect for a man who manages his affairs in a businesslike way than for one who is careless and shiftless. There is no more reason why the physician should give his patients a year or more credit, provided they are able to pay, than there is for the grocer or the butcher to do so. "Short

accounts make long friends." A course on business methods would be a very good thing for every county medical society to arrange, and undoubtedly much betterment would result; betterment not only to the physicians themselves, but to their patients and the community generally. With a harmonious profession and an active county medical society in which are all reputable physicians of the county, there will be fewer well-to-do families getting their medical attendance free, year in and year out. While commercialism, as such, has no part in the professional life of a physician, common sense or "horse sense" has, and it should be applied literally to the physician's business methods.

Benefits in Attending Medical Society Meetings.

The *Southern Practitioner* says editorially:

"Take a careful look at the membership of the American Medical Association during its entire existence for many years or of any state or local organization, and you will find enrolled therein the ablest, the most successful, the most prominent medical men of the particular time under consideration. Our busiest members have found time to participate in the meetings, if not every year, at least a great proportion of the time. Occasionally we have made overtures to professional men in regard to participating in society work, and have been met with the statement, 'We are too busy,' 'Could not spare the time;' yet a careful observation has forced the conclusion that such would have done better if they had never opened a medical book, and had devoted their time and talents to some other vocation. Unquestionably times do occur that professional or other duties will prevent attendance on a given meeting of a local or state society, and all can not attend the annual meetings of the national association; yet, if each member of the profession will but endeavor to participate in as many meetings of his local society, and occasionally attend a meeting of his state organization, he will find that the time so spent will be of more intrinsic value in the end than double the time spent in any other duty—yes, we regard this as a duty incumbent on any practitioner acting for the best interests of himself and those dependent on him for professional services. This may be regarded as a strong statement, yet it is the result of careful observation during more than forty years of professional life, and we know will be substantiated by the leading medical men of this and all other enlightened and civilized countries.

"Much has been said about the benefits and advantages of organization. Its results are seen everywhere, and to no body of men is it so important, so necessary and essential, as it is to the members of the medical profession. Except in occasional instances of consultation, their very work leads them to segregation and isolation. A daily duty of making visits as a duty renders to some extent social visiting irksome; and even though one is an omniverous reader of standard and periodical literature, he is apt to get into a groove, be limited in his views and resources, narrow in his observation—all of which is overcome by an occasional meeting with a collective number of others, some his inferiors, others his peers, and possibly a few his superiors in like work. By such association he adds his experience to that of others, and has the far wider experience of others added to his. Not all at one time, but a little at this meeting, more at another, and when he has established the habit—we are all more or less creatures of habit, of becoming a regular attendant at even local society meetings—it is astonishing how his entire methods, measures, manners, and life in all its technical details are broadened, advanced, and materially increased.

"By organization and regular meetings personal jealousies, petty bickerings, slanderous and scurrilous backbitings disappear and are supplanted by a broad and liberal ambition and emulation as to who can excel and who can add the more to the sum of professional knowledge, skill, and correct technic. Nor is it alone from the papers, essays, and discourses thereon that we can and do derive a national benefit. Some of the most practical and valuable ideas and suggestions ever received have been obtained in the personal conversation with other medical men in attendance on a meeting While many valuable ideas and thoughts have resulted from careful attention to the regular program, yet some of far more value have been obtained in the social intercourse and conversation on assembling before the meeting was called to order and after its close."

Arizona.

SANTA CRUZ COUNTY MEDICAL SOCIETY.—At the annual election of officers of the Santa Cruz County Medical Society, held at Nogales, February 1, the following was the result: President, Dr. Adolphus H. Noon; vice-president, Dr. Harry W. Purdy; secretary and treasurer, Dr. Albert L. Gustetter; delegate to Arizona Medical Association, Dr. Ray Ferguson, and censor, Dr. Nicholas K. Noon, all of Nogales. This society was recently organized on the standard plan and begins its work with good promise for the future.

California.

TEHAMA COUNTY MEDICAL SOCIETY.—Physicians of this county met at Red Bluff, Dec. 6, 1905, and after an address on organization by Dr. Philip Mills Jones, San Francisco, secretary of the state society, organized a county society on the standard plan, electing the following officers: President, Dr. John M. West; vice-president, Dr. Frank J. Bailey, and secretary, Dr. Frank L. Doane, all of Red Bluff.

PIKE COUNTY MEDICAL SOCIETY.—Under the guidance of Dr. Mallie A. Clark, Macon, councilor for the sixth district, a county society on the standard plan was organized at Barnesville, Dec. 19, 1905, with an initial membership of 13, and the following officers: Dr. John C. Beauchamp, Williamson, president; Dr. John A. Corry, Barnesville, vice-president; Dr. M. M. Head, Zebulon, secretary and treasurer; and Drs. George M. McDowell, Molena; John M. Anderson, Barnesville, and William M. Aycock, Williamson, censors.

Connecticut.

BRISTOL MEDICAL SOCIETY.—The physicians of Forrestville, Plainville and Terryville have organized a medical society.

Georgia.

TALIAFERRO COUNTY MEDICAL ASSOCIATION.—Physicians of the county met at Crawfordville February 6, and with the aid of Dr. W. W. Pilcher, Warrenton, councilor for the tenth district, organized a county medical association, with the following officers: President, Dr. Arthur C. Davidson, Sharon; vice-president, Dr. John A. Rhodes, Crawfordville; secretary, Dr. A. H. Beazley, and censors, Drs. Lawrence R. Brown, Sharon; Power, and John A. Rhodes, Crawfordville.

SPALDING COUNTY MEDICAL SOCIETY.—Physicians of the county met at Griffin, Dec. 8, 1905, and organized a county society on the standard plan with the following officers: President, Dr. Nicholas B. Drewry, Griffin; vice-president, Dr. William M. Byne, Zetella; secretary, Dr. Joseph M. Thomas, Griffin, and treasurer, Dr. Thomas J. Collier, Griffin.

MCDUFFIE COUNTY MEDICAL SOCIETY.—On January 16 the physicians of the county met with Dr. William Z. Holliday, Augusta, president of the Medical Association of Georgia, and Dr. W. W. Pilcher, Warrenton, councilor for the tenth district, at Thomson, and organized a county society on the standard plan. The constitution and by-laws approved by the state association were adopted, and the following officers elected: Dr. Edward S. Harrison, Thomson, president; Dr. Sterling R. Gibson, Thomson, vice-president; Dr. B. F. Riley, Jr., Thomson, secretary and treasurer; Drs. F. N. Ware, Thomson, and Aaron J. Mathews, Thomson, and Z. Daniel Story, Winfield, censors, and Dr. Z. Daniel Story, Winfield, delegate to the state association. Every physician in the county has joined the society.

Kentucky.

NICHOLAS COUNTY MEDICAL ASSOCIATION.—The physicians of the county met in Carlisle, January 26, for the purpose of reorganizing the county association. Dr. Robert J. R. Tilton, Carlisle, was elected president; Dr. Oliver S. Kash, Moorefield, vice-president, and Dr. George B. Spencer, Carlisle, secretary and treasurer.

Louisiana.

FRANKLIN PARISH MEDICAL SOCIETY.—The physicians of Franklin Parish met January 19 at Jonesboro and organized a medical society in affiliation with the Louisiana State Medical Society, with the following officers: Dr. Mallory B. Culpepper, Hood's Mill, president; Dr. George E. Cannon, Jonesboro, vice-president; Dr. J. A. Gaar, Jonesboro, secretary; Dr. Isaac M. George, Jonesboro, treasurer.

Maine.

MEDICAL ASSOCIATION OF KENNEBEC COUNTY.—At the regular meeting of this association, held in Waterville, January 24, Dr. Seth C. Gordon, Portland, delivered an address on organization, giving the history of the work already done in that line through the efforts of the American Medical Association.

Michigan.

ALLEGAN COUNTY MEDICAL ASSOCIATION.—This association has been consolidated with the Kalamazoo Academy of Medicine.

Missouri.

LAWRENCE COUNTY MEDICAL SOCIETY.—Twelve physicians of this county met at Mount Vernon recently and organized a county society, adopting the standard constitution and applying for a charter to the Missouri State Medical Association. The following officers were elected: President, Dr. James A. Harris, Mount Vernon; vice-president, Dr. F. S. Stevenson, Aurora; treasurer, Dr. John P. Andrews, Marionville; secretary Dr. Charles A. Moore, Aurora, and censors, Drs. Alphonso H. Madry, Aurora; Charles W. Shelton, Mount Vernon, and John B. Fleming, Aurora.

New Jersey.

MERCER COUNTY MEDICAL SOCIETY.—At a meeting of this society in Trenton, January 9, a complete report was made by the committee which had had in charge the consideration of the reorganization of the society on the standard plan.

North Dakota.

TRAILL-STEELE COUNTY MEDICAL SOCIETY.—The physicians of Traill and Steele counties met in Mayville, January 31, and organized a society on the standard plan with the following officers: Dr. Kristian A. Wadel, Portland, president; Dr. George McIntyre, Mayville, vice-president; Dr. Edward C. Haagensen, Hillsboro, secretary, and Dr. Archibald N. Currie, Hatton, treasurer.

South Carolina.

FOURTH DISTRICT MEDICAL SOCIETY.—Physicians of the fourth district met in Greeneville, February 5, and organized a district society on the standard plan. Dr. J. Wilkinson Jervey, Greeneville, councilor for the fourth district, was elected chairman, and Dr. Edgar A. Hines, Seneca, secretary.

Texas.

SMITH COUNTY MEDICAL SOCIETY.—The medical society of this county has changed its method of work, and on January 9 began a series of monthly postgraduate courses in medicine to which every physician in the county was invited. A program of clinical work for the day was arranged, cases and demonstrations being given in tuberculosis, heart diseases, diseases of the kidneys and diseases of the skin. This movement is a gratifying evidence of the beneficial results of the work done in Texas by Dr. McCormack in the fall.

Utah.

CACHE VALLEY MEDICAL ASSOCIATION.—A number of physicians from the Cache valley, including some from Preston and Franklin, Idaho, met in Logan City, January 24, and organized a medical association in uniformity with the state association. The following officers were elected: President, Dr. Russell J. Smith, Smithfield; vice-president, Dr. G. W. States, Franklin; secretary and treasurer, Dr. Heber K. Merrill, Logan, and program committee, Dr. R. J. Smith, Smithfield; Dr. Albert H. Cantril, Hyrum, and Dr. Emery, Preston.

Virginia.

RAPPAHANNOCK VALLEY MEDICAL SOCIETY.—The physicians of Fredericksburg have reorganized this society and have elected Dr. Joseph N. Barney, president, and Dr. W. Jeffries Chewning, secretary and treasurer. The first meeting of the reorganized society was held January 5.

Society Proceedings

JEFFERSON COUNTY MEDICAL SOCIETY.

Regular Semi-monthly Meeting, held at Birmingham, Ala., Jan. 22, 1906.

The Gospel of Patent Medicines.

DR. J. ROSS SNYDER read a paper with the above title. He said that the medical profession had been accused by some ministers of harboring skepticism and infidelity. After denying the breadth of this charge, Dr. Snyder suggested that the attitude of many leading ministers toward patent medicines was so inconsistent with high standards of morality that physicians in turn might well speak skeptically of the ministers. Many ministers lend encouragement to patent-medicine frauds, some by testimonials, others by soliciting and publishing advertisements in the religious papers over which they have control.

In a recent issue of the *Alabama Christian Advocate* there were seventy advertisements in all, twenty of which were of patent medicines. In the *Alabama Baptist*, out of fifty-two advertisements twenty-two were of patent medicines. Dr. Snyder gave the names of the medicines advertised in both papers, but did not discuss in detail all of them. He thought this not necessary, for the fraud contained in many of the advertisements was too glaring to permit any plea of ignorance by the publishers of the papers. A few of the advertisements, however, he discussed in detail.

The proprietors of Dr. Lord's headache powders had admitted to Dr. Snyder that the preparation contained about two grains of acetanilid to the dose. The deleterious and sometimes fatal effects following the continued use of acetanilid were illustrated. Dr. Snyder suggested that the Alabama State Medical Association ought to father a bill prohibiting the sale of acetanilid except on a physician's prescription.

Physicians can only deal successfully with tumors and cancers by using the knife. "Dr." Bye, however, says he can remove any of these with oils. That any oil, potent enough to take the place of the knife in the removal of tumors and cancers, can be either "balmy" or "soothing" is a contradiction striking enough to be ludicrous.

Mrs. Winslow's soothing syrup advertisements found conspicuous space in both papers. The active ingredient in this syrup is opium. The physiologic action of opium, the susceptibility of children to the drug, and the opium habit were discussed. Soothing syrups were characterized as the most damnable of all nostrums.

"Mrs. M. Summers" advertised in one of these religious papers a preparation for the cure of all female troubles. Dr. Snyder showed that back of this advertisement is not a woman, but a pharmaceutical house which manufactures seventeen doubtful preparations. The advertisement is a deception meant to obtain from women their secret conditions, revealed in the belief that they are communicated to one of their own sex.

The "Marvel whirling spray syringe" was cited as another indecent advertisement. If the publishers of the paper do not know that this is sold chiefly as an instrument for preventing conception they are less discerning than a majority of their readers. It requires no stretch of the imagination to trace the downfall of a young girl to too close reading of a religious paper.

Some states and some secular papers prohibit the publication of obscene and indecent advertisements. It is a remarkable comment on Christian churchmen that they are less discriminating on this question of morality. Attention was called by Dr. Snyder to the inconsistency of any paper pleading for the temperance cause and publishing in the same column the advertisement of alcoholic patent medicines.

In reply to a subscriber's criticism of the patent-medicine advertisements in a certain religious paper, one of the editors said in the paper that "there is plenty of good reading in the paper except those who were scenting around for something to object to; the patent-medicine advertisements are only intended for people wanting something of that kind." This editor was compared to a minister who would build a brothel, a saloon and a church under one roof, and who would defend himself by saying that the church was big enough for all good people, and only those "wanting something of that kind" need get into the other two places.

After expressing the hope that the evil of "patent medicines" was becoming generally admitted, the ministers were invited to "come over on the Lord's side."

DISCUSSION.

DR. THOMAS D. PARKE sustained the general charge and stated that reform along this line had been earnestly urged on the press by the society more than once during the past ten years.

The editors of the two local religious papers had been notified in advance of the topic for discussion, and had been invited to be present. They were accorded the privileges of the floor and were invited to express themselves on the charges preferred.

REV. FRANK W. BARNETT, editor and proprietor of the *Alabama Baptist*, acknowledged a realization of the impropriety of some advertisements carried by his paper, and stated that he was engaged in an investigation looking toward the possibility of discontinuing such, when apprised of the nature of the meeting. He further explained that he found himself bound by a three-year contract to carry many of these advertisements until the expiration of this agreement, and would, when possible, discontinue the advertising of such nostrums as might be proved to be of a harmful character. Going into the methods of advertising agencies, as explained to him through their representatives, he stated that one department had charge of all "patent-medicine" advertising in all religious papers in the southern states; that the refusal of one or more advertisements by one or more papers in a state might nullify the contract for the agency or its representative, and that such arguments were adduced by said representatives as obligations on the papers to continue such advertising *in toto*. He confessed that he had failed to see the fraudulency or impropriety of certain advertisements which Dr. Snyder believed to be self-evident.

REV. J. D. ELLIS, editor of the *Christian Advocate*, corroborated in the main the defensive plea offered by the preceding speaker. He cited one clearly indecent advertisement which had appeared twice in his paper, to be withdrawn, and believed Dr. Snyder should be given due credit for such action, and for the expressed intention of discontinuing some advertisements when found possible.

DR. SNYDER stated his failure to discover reasonable evidence of intention or efforts toward a proper reformation and reiterated his charges.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

Regular Meeting, Jan. 24, 1906.

The President, DR. CHARLES K. MILLS, in the Chair.

SYMPOSIUM ON THE CARE OF THE INDIGENT INSANE.

Public Care of the Insane.

DR. JOHN B. CHAPIN, of the Pennsylvania Hospital for the Insane, likened the Philadelphia Hospital to an enlargement of the county poorhouses of early days, caring for the sick, poor, paupers, idiots and insane. It was stated that from a general observation the majority of the insane poor were, previous to the insanity, self-supporters, rent-payers, and in a sense indirectly tax-payers. They were, therefore, entitled to relief and care. The first essential in their care was said to be an absolute divorcement of the insane from an almshouse with its associations and traditions. The new hospital should be in the country. There should be a qualified medical director, clothed with ample power, possessing a reasonable tenure of office and in no way subject to a so-called warden, who would soon or late stand for some political organization. Among some of the results realized by the chronic class of patients would be the formation of orderly habits of living and occupation afforded by the opportunities of a farm and a large community, decided improvement in the mental condition of the whole number and the restoration of many to their families.

Whether this work should be undertaken by the city or state was considered immaterial, provided it was well done. If undertaken by the state there will be a reasonable guaranty that a higher standard of care would be maintained and the institution be free from the demoralizing influences of politics. Accommodation should be provided for at least 1,800 patients, together with the necessary officers and employes, and a scheme agreed on to meet the inevitable annual permanent increment. The plan of erecting plain, substantial blocks, or detached buildings, supplemental to an administration building, which could be added to from time to time, furnishes a suggestion for the scheme which is now proposed. The detached blocks furnish extraordinary facilities for classification of special cases and reduces the danger of destruction by fire to a minimum. Any plan presented should permit of additions and expansion as necessary.

Assuming the removal to the country of the pauper population, Dr. Chapin believes there should be provided on the present site a hospital for the reception of emergency cases, acute cases of delirium from any cause and persons arrested requiring temporary detention on the sudden outbreak of insanity. Many such cases, he believes, would be discharged without transfer to the colony. This institution should be a hospital in name and fact, equipped for the best hospital care of acute cases.

The adoption of some such plan as outlined, Dr. Chapin believes the only one which will solve the present problem of the disposition of the large number of chronic insane persons now in the Philadelphia Hospital. Each patient should have a proper allotment of cubic and superficial space, and a dietary should be established to meet the wants of the able-bodied as well as the sick and feeble. There should be organized a medical service of a high standard for the emergency wards. This, in Dr. Chapin's opinion, the medical profession has a right to demand as citizens and sympathizers with a distress that may afflict any one in the community. If this is well done he does not think tax-payers will question the expenditure. To do less than is proposed he believes will result in the gradual degeneration of the whole service, as has been shown in every municipality where the attempt has been made to care for the insane poor apart from state supervision and control.

State Care of the Insane in New York.

DR. FREDERICK PETERSON, ex-president of the New York Commission in Lunacy, in reading this paper said that it was a singular circumstance that a stranger should speak to Philadelphians on the humane care and treatment of the insane, for Philadelphia had been the first city in the Union to preach the gospel of sickness for these unfortunates and the first to practice the doctrine. More than 150 years ago Philadelphia established a hospital for the insane, which was a long step in advance of that period. Dr. Rush, of Philadelphia, was the Pinel of America. He abolished whipping as a remedial measure for insanity and discarded manacles and chains.

Dr. Peterson reviewed the progress of the insanity legislation in the State of New York, the first step of which was taken fifty years subsequent to the establishment of a hospital for mental disorders in Philadelphia. By 1896 all of the indigent insane of the State of New York had been placed under state care. The fourteen state hospitals and the twenty-three private retreats for the insane are all under the jurisdiction of the State Commission in Lunacy, consisting of a physician, a lawyer and a business man. These private retreats are supervised and inspected, and licenses may be revoked on failure to comply with the regulations of the commission. This body has not only supervision over the state hospitals, but the entire management of the expenditures for the maintenance of the patients and the construction of new buildings. The old idea of separate provision for the acute and chronic patients was long ago abandoned.

A summary was given of changes in contrast to the methods employed in the county management. Among these were the establishment of training schools for nurses in all of the state hospitals, a central pathologic institute or school of psychiatry at Ward's Island in the New York City asylums, to which all the assistant physicians from the various hospitals of the state go for instruction in the latest scientific methods of study and treatment of the insane. This is under the directorship of Dr. Adolf Meyer. Most of the hospitals have staffs of consulting physicians from neighboring cities. A woman physician, a salaried dentist and an oculist are required at each hospital. Each hospital is thoroughly equipped with everything needed in medical and surgical instruments and appliances. Emergency commitments now in force give speedy access to hospital care. Restraint by means of straps, etc., has been almost abandoned, and some wards have unbarred windows and doors. Occupa-

tions for the patients have multiplied and the work of the able-bodied in shops, gardens, fields have monetary value. Wards and rooms have been made attractive and religious services are held by salaried chaplains. Special tuberculosis hospitals have been constructed at several of the county asylums, and several of the hospitals have small colonies at a distance for the care of convalescent patients in change of air and scene.

New York State has appropriated $300,000 to construct a psychopathic hospital on Manhattan Island to act as a distributing center for the insane of all classes. It was urged that every great city should have emergency pavilions in connection with the hospitals to which patients supposed to be insane can be at once taken, not only for observation, custody and diagnosis, but for immediate treatment.

DISCUSSION.

DR. W. M. L. COPLIN thought that no large city could properly care for the insane and the indigent not insane in its corporate limits on account of the value of the ground and because of the higher cost of maintenance than in the country districts. The general influence of the outlying districts, he felt, was better than that of the city. He favored the establishment of detention or observation wards similar to those in New York for the treatment of cases curable within a reasonable time and for cases in which careful study might offer better methods of treatment. Such quarters should accommodate from 200 to 300 patients and should be exceedingly elastic to prevent possibility of overcrowding. They should be well officered with eight or ten volunteers, and in addition men of experience and competent to teach the volunteers. Above these there should be a consulting or directing staff, composed of men of eminence. He would have the tuberculosis cases treated separately from those not tuberulous. He regarded the present unfortunate condition of the insane poor of Philadelphia largely the result of an increase in numbers, which had exceeded the growth of facilities, and said that it was difficult to impress on governing bodies who distribute the public funds the fact of the increase of numbers of the insane poor and the advances made in the treatment of insanity.

The question of hired help was also considered. Intelligent help would naturally work in those institutions in which the environment was in accord with their own individuality, and the city institution would probably receive what was left. The point to be realized by the medical profession was that law-making and appropriating bodies would give that which was desired if the matter were kept before them and the urgency shown. It was well to drive home to the people the necessity of such reforms and have their sympathy.

DR. F. X. DERCUM said that specific and practicable plans should be outlined, and believed that the psychopathic hospital which should take the place of detention wards was a necessity and a feasibility. The stigma of a commitment also by this means would be obviated. He would favor caring for the insane of the city at Norristown, where there are ample grounds for buildings; and, because of its ready access from Philadelphia, patients could be readily transferred from the psychopathic hospital. He expressed his hearty accord with the idea of convalescent wards and colonies if they be proven practicable. He thought all were painfully impressed with the difference in the care of the insane of Philadelphia and that of New York, and felt that it was largely dependent on the profession to make known the wants of the insane and to maintain the agitation until something definite shall be achieved. He realized the difficulty of securing the highest-class attendants at the almshouse, but thought it might be overcome by the establishment of training schools. He would favor the establishment of a training school for men similar to that in New York who would take charge of the male wards in the hospital and in the psychopathic department. The pupils should receive little or no pay and leave at the end of a definite time with a definite earning power. To get along with the no-restraint method there would be a larger number of attendants and better paid attendants required. He agreed with Dr. Coplin that the authorities would grant the improvements asked for by the medical profession.

DR. CHARLES W. BURR said that he knew of no new argument for a change of conditions at Blockley, that it was a perfectly well-known fact that the insane department of the Philadelphia Hospital and, indeed, of Blockley itself, was not an honor to the city of Philadelphia. It was also known, or ought to be known, that it was the fault of no one but the citizens of Philadelphia. They were blameworthy, first, because they do not like to spend money, and, second, because until very recently they were perfectly willing to be robbed, so long as the money was not taken out of their individual pockets. The one way to straighten out the difficulty was to take the care of the insane poor entirely out of the hands of the city. He favored the establishment of the psychopathic ward in which cases of acute mental disease could be taken at once.

DR. WILLIAM G. SPILLER said that no one could doubt the needs of Blockley, that until within the last few weeks patients had been sleeping on the floors. The subject which Dr. Coplin had brought before the public was not a new one. He recalled the hopefulness entertained by many of the staff for a few years previous when looking about for a site, which efforts, however, had fallen into the background, and it was not surprising that a pessimistic view had overtaken some. Personally he was delighted to know of the hopeful outlook held by Dr. Coplin. In listening to Dr. Peterson's paper he felt the difference existing between New York and Pennsylvania in the care of the insane. Reference was made to the high class of work done by Dr. Meyer on Ward's Island. He asked that Dr. Peterson would describe the non-restraint system. It had been his misfortune to have a patient jump out of a window; this, he felt, was also likely to occur among those slightly insane.

DR. WILLIAM PICKETT believed that the immense advance in New York State in the care of the insane was largely due to the fearless and energetic work of Dr. Peterson. During the ten years of Dr. Pickett's association with Blockley he had seen several plans developed, all of which had failed. The present movement he believed would succeed under the management of Dr. Coplin. He felt strongly that it was an ordinary commonsense proposition that Philadelphia should have an emergency ward for the insane. In 100 admissions to the insane wards he had found that thirty patients recovered in two months or less, twenty-four in six weeks or less and that about sixteen recovered within a month. All of the trouble, expense and stigma—if there be such—of a commitment could be thus saved by the emergency ward or hospital. Such a ward he believed in addition to lessening the number of chronic insane in the state hospitals, would diminish the tendency to recurrence of insanity, and above all, would save from an insane asylum many of the cases of puerperal insanity, and confusional insanity in terminal Bright's disease, pneumonia and other physical disorders. In such a psychopathic hospital there should be accommodations for at least 300 patients.

DR. ALFRED GORDON emphasized strongly the necessity of first instructing the general practitioner in the psyschiatry. Should the hospital for the insane be removed from the city, he thought there would be removed the practical means of giving this instruction, and that the future general practitioner would know still less than is known at present of the science and treatment of insanity. He said that in France the study of insanity was made one of the branches in the general curriculum, and that there the general practitioner was able to talk with the laity in an intelligent manner if the necessity arose. He believed that the general hospitals should have a special or psychopathic ward for receiving patients who in the course of pneumonia or other infectious disease might develop delirium. Regarding the insane department of the hospital he would suggest that the staff of alienists take full charge of it, each member of which staff should give at least six months attendance. In addition to this a large number of resident physicians snould be appointed. He would place the superintendency in the hands of a layman who would work under the absolute direction of the staff. The psychopathic ward should also be under the full charge of the staff of alienists, for cases even slightly confused at the beginning should be under the care of eminent men.

DR. HAWK thought that the state should have immediate care of the city insane. He said that those in charge at

Blockley were greatly handicapped by insufficient funds, and that for the more than 1,800 patients there was a totally inadequate number of physicians. The work of the internes as alienists he regarded as practically useless. At times 15 to 20 cases were admitted in a day. Only within the last month had the full quota of assistants been allowed by councils. Last year there had been paroled and discharged over 12 per cent. of the whole number of patients under treatment. In the majority discharged as recovered it was meant that they were possibly as well as they had been for some time prior. In 4 or 5 per cent. there was absolute recovery. The death rate had been 13 per cent. plus. This was due to the fact that many of the cases are of senile dementia with a large proportion between the ages of 70 and 100 years. Such cases had been transferred to the insane department because there was no other means to take care of them. Dr. Hawk thought the average for other cases would compare favorably with those of many of the New York asylums, and said that every endeavor had been made to keep the standard at Blockley high, but that the means had been entirely inadequate for the purposes desired.

DR. A. R. MOULTON feared the idea would go out that the medical work at Blockley was not well done. He had, however, had opportunity for observing the work at Blockley and could say that the medical work in the insane department was most excellently done, and this was emphasized by the fact of the very large number of patients and the small number of medical attendants. He felt it a duty, as it was also a pleasure, to state that Dr. Hawk had done most excellent work in the Philadelphia Hospital.

DR. WILLIAM S. WADSWORTH referred to the housing of the insane, pointing out that all could not be housed in the same manner; some could not be put into tents; the working insane should not be housed with the feeble bodied, nor the maniacal with those only temporarily insane. Tents were regarded as undesirable because of the difficulty of keeping them clean. He favored the use of pavilions with the buildings running north and south and placed sufficiently far apart that each would get the east and the west sunlight on the sides of the buildings. There should be connection with the main hospital and as well the ability to isolate any ward at a moment's notice.

The matter of occupation he regarded of extreme importance. There should be something for them to do which would abstract that moral and mental tension which was their destruction. Without a due regard to this element the subject was only partially covered. As medical men, he thought the profession was prone to think principally of the sick insane. There should be something to keep the patient from thinking of himself and so sitting in the darkness of their own minds.

DR. PETERSON approved of Dr. Wadsworth's suggestions of occupation for the patients and said that the colony system included this. He thought the effort in Philadelphia should be to establish the psychopathic hospital in the city for emergency cases and then, as soon as possible get all the other insane into the country. He suggested that the passage of a law providing for the maintenance and equipment of such an institution on condition that Philadelphia furnish the land and erect the building might be helpful in the project. In New York such a law had been passed in securing their psychopathic hospital.

Therapeutics

[It is the aim of this department to aid the general practitioner by giving practical prescriptions and, in brief, methods of treatment for the diseases seen especially in every-day practice. Proper inquiries concerning general formulae and outlines of treatment are answered in these columns.]

Arteriosclerosis.

Arteriosclerosis, according to Sir James Barr, in the *British Medical Journal*, is a disease which causes the death of more men in the prime of life and vigor of manhood than any other. The etiologic factors which enter into the cause of this disease are lead, alcohol, excessive nitrogenous foods, age, sex (being more common in men), physical strain, which is a potent factor in causing high arterial tension and cardiac hypertrophy, leading to early degeneration, as shown in athletes and in laborers. Cold is also regarded by the author as an agent which raises the general blood pressure sufficiently high to produce general arteriosclerosis by long contraction of the superficial vessels and their vasa vasorum. Worry, anxiety and all forms of mental strain are also powerful factors in the production of this condition. He speaks of Americans as being more liable to this disease than natives of other countries, stating that at the age of 60 the majority of Americans are old. In the treatment of this disease the first and important thing to be considered is diet. Too much nitrogenous food should not be consumed. In this connection he refers to the work of Professor Chittenden on the physiologic economy in nutrition. Although he recommends diet of low proteid value for healthy adults and for those suffering from arteriosclerosis, for growing individuals whose tissues are not fully developed a more liberal allowance of nitrogenous substance should be given. Not only should the amount of food be considered, but the mastication should be slow and the food should be thoroughly divided. A good rule which is laid down in this respect is never to eat until you have an appetite, then to eat slowly, to masticate thoroughly, and never to eat to repletion. Exercise should be prescribed to suit the different individuals, according to age and physical development.

Regarding the administration of medicines, he makes the statement that there are two classes of drugs which he never, or very seldom, prescribes, namely, digestive agents and hypnotics, for if a man can not sleep or can not eat there is something wrong with him and he should be treated and not palliated. As in this condition the man eats too much, his digestion fails him, the insomnia depends on high blood pressure, consequently the cause in each instance must be removed rather than the symptoms treated.

The thyroid preparations are spoken of as very useful in the treatment of arteriosclerosis, as it has been shown that they dilate the arteries. Iodin is often more valuable than thyroid extract, as its metabolic effects are attained by a stimulating action on the thyroid gland. The author prefers the tincture of iodin and the syrup of iodin and tannic acid to the more stable iodids. Adrenalin is, as a rule, injurious in arteriosclerosis, but when combined with thyroid extract or iodin it occasionally does good by maintaining arterial tone and stimulating the heart.

THE CITRATES.

The citrates, according to A. E. Wright, have a decidedly decalcifying effect on the blood. At first they lessen the coagulability, but after prolonged use this is increased, and is due, according to Wright, to the fact that the citrates dissolve the lime salts out of the tissues.

THE BENZOATES.

The benzoates have been favored remedies with this writer, especially in that form of arteriosclerosis associated with kidney involvement. Uremic convulsions cease under their free administration, and they are said to convert uric acid into the more solid hippuric acid and to eliminate other purin bodies. Acting similarly to the salicylates, they have a cholagogue action.

THE SULPHATES.

The sulphate and the hyposulphite of sodium, sulphate of magnesium and numerous purgative mineral waters have a good effect in clearing out the intestinal tract and in lowering blood pressure.

THE CHLORIDS.

The chlorids should be limited, as they are depressor agents. Calcium chlorid should not be administered unless there be some definite indications for its use, such as a severe hemorrhage or cardiac failure. Sodium chlorid should only be taken by gouty individuals and in limited quantities. As to other depressor agents, the hippurates of ammonium and sodium are recommended. The nitrites are valuable agents in cases of emergencies, but their effects are too rapid to render them desirable for constant use.

Corneal Ulcers.

Lawson, in an abstract in the *Medical Press*, states that corneal ulcers may be relieved by the treatment with quinin.

especially those large ulcers involving the true cornea, and which are not very infectious; marginal ulcers, scalloped and ring ulcers; all infiltrating and infective ulcerations which are not undermining the edges; neuropathic ulcers. He does not recommend quinin in the treatment of the small superficial ulcers, which usually heal readily under simple and less irritating lotions. The form of quinin solution he recommends is the following combination:

R. Quininæ sulphatis.....gr. iv |20
Aquæ dest. .....℥i 30|

M. Sig.: The eye is to be thoroughly douched with the solution for five minutes by means of an ordinary eyebath, and repeated four or five times a day.

To the foregoing combination the least possible amount of dilute sulphuric acid should be added to dissolve the quinin salt. Atropin should be instilled twice a day and a bandage applied.

Treatment of Cystitis.

Dr. Howard A. Kelly, in the *Dominion Medical Monthly*, states that in the etiology of cystitis the important predisposing factors are localized congestion, traumatism, retention of urine, reduced health. The exciting causes are the various organisms which have been found in this condition. The clinical forms, according to the writer, are the catarrhal, desquamative, ulcerative, granular, papillary and bullous edema. In the treatment of this condition he states that three important factors should be considered: First, a carefully written analysis of the case, including a description of the appearances in the bladder; second, a well-defined course against the disease; third, great patience on the part of the physician and the patient. In the prophylactic treatment he speaks of not only thoroughly sterilizing the catheter before introducing it, but at the same time cleansing the internal meatus. Further, when there is reason to fear cystitis, and always when the catheter is used, it is well to use hexamethylenamin (urotropin) for a few days in from 5 to 10 grain doses three times a day as a prophylactic. He states that cystitis will rarely occur if this precaution be taken.

The systematic treatment includes medicines by the mouth, injections into the bladder, direct topical treatments of the vesicle walls and surgical treatment, including incision of the bladder. The patient should be put to bed, with complete quiet; the diet should be regulated, tonics administered, with the proper regulation of elimination by the bowels, and massage and baths. As to medicines by the mouth, he recommends large quantities of water. Hexamethylenamin (urotropin) in from 5 to 10 grain doses is of great value in the more recent cases, especially when there is a tendency to alkaline changes. When the urine is too acid, potassium citrate is of value. Boric acid is useful when it is desired to render the urine acid. The administration of the fluid extract of cornsilk (*Zea mays*) in teaspoonful doses will not infrequently have an ameliorating effect on the symptoms. Irrigation, however, is the most important means of treatment of this disease. The simple daily cleansing of the bladder is of exceeding benefit, and by this means he speaks of bringing some very rebellious cases to a successful end. He speaks of the surgical treatment of this disease as consisting of minor surgery in some cases, while major surgery must be resorted to in others.

Rheumatism.

The following combinations are recommended by the *Journal of Medicine and Science* for the local treatment of rheumatism:

R. Acidi salicylici .....℥i 4|
Lanolini .....℥v 20|

M. Ft. unguentum. Sig.: Apply locally to the affected joint. Or:

R. Extracti belladonnæ.....gr. v |30
Acidi salicylici |
Sodii salicylatis, āā.....gr. xx 1|30
Lanolini .....℥iv 15|

M. Ft. unguentum. Sig.: Apply locally. Or:

R. Ichthyoli .....℥i 4|
Lanolini .....℥ii-vi 8-24|

M. Ft. unguentum. Sig.: Apply locally.

Medicolegal

Vermont View of Compounds Containing Alcohol.

The Supreme Court of Vermont says that, in the case of State vs. Costa, where the main question was whether the defendant kept a certain "malt extract" to sell for medicinal uses only, or whether he kept it to sell for use as a beverage, the trial court permitted the actual amount of alcohol and of the other ingredients of the extract to be shown, and properly did so, for the character of a liquid containing more than 1 per cent of alcohol may be such that its use as a beverage is impossible, as is the case with some virulent poisons. The mere fact that a liquid can be and is swallowed does not make it a beverage. So it must be said, in the case of extracts, tinctures, essences and compounds having a legitimate use for medicinal, culinary or toilet purposes, that the mere presence, as a solvent, preservative or otherwise, of more than the proportion of alcohol named in the statute, does not make the preparation one to which the statute applies. In respect to such articles the inquiry is not simply whether they contain more than 1 per cent. of alcohol, but there is the further inquiry whether or not the articles are sold to be used as a beverage. In respect to the sale of such preparations the intent governs. If there is no intent to sell these preparations for other than legitimate uses there is no offense. If, however, a preparation is capable of being used as a beverage, and is sold or kept for sale with the purpose, intent or understanding that it is to be used as a beverage, then, if it contains more than 1 per cent. of alcohol, an offense is committed.

Injurious Substances in Bottles—Fear of Death.

The Supreme Court of Georgia holds, in the case of Watson vs. Augusta Brewing Company, that a manufacturer who makes and bottles for public consumption a beverage represented to be harmless and refreshing is under a legal duty not negligently to allow a foreign substance which is injurious to the human stomach, such as bits of broken glass, to be present in a bottle of the beverage when it is placed on sale; and one who, relying on this obligation and without negligence on his own part, swallows several pieces of glass while drinking the beverage from a bottle, may recover from the manufacturer for injuries sustained in consequence. The court says that the case of Blood Balm Co. vs. Cooper, 83 Ga., 457, while differing somewhat as to its facts, furnishes strong reasons to support the principle announced. The composition of patent or proprietary medicines is usually shrouded in mystery, and it is generally understood that many such remedies contain ingredients which, if taken in sufficient quantities, will produce injurious results on the person taking them. If, then, one who buys a patent medicine may rely on the obligation of the manufacturer not to place therein ingredients which, if taken in the prescribed doses, will injure his health, certainly the purchaser of an alleged harmless and refreshing beverage should have the right to rest secure in the assumption that he will not be fed on broken glass. Moreover, the duty not negligently to injure is due by the manufacturer in a case of the particular character of the one under consideration, not merely to the dealer to whom he sells his product, but to the general public for whom his wares are intended.

A somewhat peculiar ground of demurrer, the court further says, was one advanced in this case which sought to place on the plaintiff the burden of showing "the size and kind of glass" that he swallowed. Courts have gone far in requiring particularity of pleading, but this court is not aware of any rule which would require a man who has unconsciously swallowed several pieces of glass to make a note of the shape, size, color and character of the pieces after they have been removed from his stomach, in order to describe them in bringing suit to recover from the one who is responsible for his having swallowed them.

On the question of whether or not the plaintiff in this case could recover for mental suffering growing out of his injury, and, if so, to what extent, the court says that it is a familiar principle that, where a physical injury has been sustained, the injured may recover for mental suffering caused by or growing out of his bodily hurt. One may not recover, however, for mental suffering which is not reasonable or which is merely fanciful. It can hardly be disputed that a reasonable fear of death constitutes mental suffering of a very keen sort. It is not unreasonable, this court thinks, for one who has swallowed several pieces of glass to entertain a very vivid and poignant apprehension of an untimely end, and the mental anguish caused by this dread may constitute an element of damage in a suit for damages on account of the physical injury. But after the glass has been removed from his stomach and he is apparently restored to his former condition of health and vigor, his fears, so far as a damage suit is concerned, should cease. He may not continue for an indefinite period to vex his soul with dread on account of having been "cut on the inside" and hold the defendant liable for his apprehensions.

Admissibility of Evidence of Experiments by Experts.

The Supreme Judicial Court of Massachusetts says that one of the questions claimed at the trial of the defendant in the homicide case of Commonwealth vs. Tucker to be material was whether the azygous vein of the victim was severed by the stab in the back, the commonwealth contending that it was and the defendant contending to the contrary. One witness, a medical expert, called by the defendant, on direct examination testified at first, in substance, that while it was barely possible that the vein was thus severed, yet it was highly improbable, and finally said that to him it seemed impossible. He was then asked whether he had made any experiments for the purpose of "ascertaining that opinion," and in reply he said that he had. He was further asked whether or not he had made experiments on a body approximating the size of the body of victim in this case described by him, and he said that he had. But, objection being made, he was not allowed to show the nature of the experiment. This, the court holds, was correct.

Whether the details of an experiment not otherwise material may be shown as having some bearing as substantiative evidence on a question on trial, the court says, depends on the nature of the question and that of the experiment. If, for instance, the question be with reference to the operation, chemical or otherwise, of some natural force which acts uniformly under any given conditions, and the conditions under which the experiment is made are shown to be so similar to those which existed in the case on trial that the court can see that the experiment may be really of assistance to the jury, the details of the experiment may be put in as independent evidence. The true ground of admitting the details and result of such an experiment is that it may be of assistance, but the question whether it may be or whether it may or may not lead to too many collateral questions, is largely within the discretion of the court. It is manifest that in view of the nature of the question in dispute here, namely, whether the azygous vein was cut by the stab in the back, taken in connection with the difference necessarily existing between the conditions in the case on trial and those under which the experiment was performed and the obvious difficulty, if not impossibility, of ascertaining whether such difference had any material effect on the result, the court was fully justified in excluding the experiment or any inquiry into its nature.

It was argued, however, that inasmuch as an expert has the right to explain the reasons for his opinion, it was competent for the witness to state this experiment in detail, to fortify his opinion. But, the court says, it is settled in Massachusetts that the rule allowing an expert to give the reasons for his opinion has its limitations, and one of them is thus stated: "A party can not put in evidence incompetent facts under the guise of fortifying the opinion of his witness, even if the evidence might have been properly admitted on the cross-examination of the expert." The experiment in question being incompetent as substantiative evidence, the court properly excluded all evidence as to its nature, even whether made on a dead or a living body, although offered under the guise of a reason for the opinion of the witness.

Current Medical Literature

AMERICAN.

Titles marked with an asterisk (*) are abstracted below.

American Medicine, Philadelphia.

February 10.

1 *Arteriosclerosis as a General Disease. A. Stengel, Philadelphia.
2 *Asthma. J. R. Arneill, Denver, Colo.
3 The Problem of Psychiatry in the Functional Psychoses. (Concluded.) E. Cowles, Boston.
4 *Treatment of Mediastinal Carcinoma with the Roentgen Rays. G. E. Pfahler, Philadelphia.
5 *Case of Cerebrospinal Meningitis. G. C. Merriman, Scranton, Pa.
6 Edibility of Animal Spleens. E. T. Williams, Boston.

1. **Arteriosclerosis as a General Disease.**—Stengel says that three stages of the disease may be recognized: 1. A preliminary one difficult of recognition in its beginnings and confusing to the clinician in his first efforts to distinguish what part the etiologic factors have contributed to the symptom-complex and what part has resulted from the arterial disease itself. 2. A middle period, during which the arterial disease is easy to recognize, but in which secondary organic changes have a rôle of variable importance. 3. A final stage of failure of circulation, organic failure and terminal infection. In the more advanced stages of arteriosclerosis the disease may be classified under the following headings: 1. The thoracic (a) cardiac or disturbances incident on special involvement of the coronary arteries; (b) aortic, referring not merely to aneurism, but also to a sclerotic and calcareous roughening without dilatation but causing embarrassment of cardiac action. 2. Abdominal (a) renal, manifesting itself in the symptoms of chronic interstitial nephritis; (b) intestinal as evidenced by atrophy of the mucous membrane, tendency to chronic colitis, etc.; (c) pancreatic, difficult of recognition, often, however, active in diabetes; (d) hepatic, occurring as cirrhosis; (e) cerebrospinal —most numerous and varied; and (f) arteriocapillary, manifested in moderate circulatory disturbances.

2. **Asthma.**—Arneill reports six cases, illustrating a variety of causes and treatment. The pathology is summed up as follows: 1. A vulnerable mucous membrane. 2. Abnormally sensitive nerve centers. 3. An external irritant or exciting cause. 4. The presence in the body of known and unknown substances which are toxic to patients susceptible to asthma.

4. **Roentgen Ray in Mediastinal Carcinoma.**—Pfahler reports six cases in which carcinoma of the mediastinum developed secondary to carcinoma of the breast. All the patients had been operated on previously. Three of the six patients have apparently recovered, though they are still under observation. In none was any bad result noted.

5. **Cerebrospinal Meningitis.**—Merriman believes that the enormous percentage of mortality in pneumonia among children has been due, in many instances, to unrecognized meningitis. He says that in every case of acute lung involvement in children a careful examination should be made of the spine and neck and eyes. Pressure over the spine and at the base of the skull will bring out the tenderness in the cervical and dorsal regions. Examination of the eyes will sometimes, not always, show some inequality in the pupils, and the presence of photophobia.

Medical Record, New York.

February 10.

7 *New Method of Testing the Functions of the Digestive Apparatus. M. Einhorn, New York.
8 *What is the Climacterium? S. W. Bandler, New York.
9 Pneumonia. H. B. Weaver, Asheville, N. C.
10 Modern Conception of Matter. W. D. Horne, Yonkers, N. Y.
11 Case of Tympanic and Mastoid Cholesteatoma; Extradural Abscess; Sinus Thrombosis. D. M. Barstow, New York.
12 *Notes on the Cerebrospinal Fluid. N. A. Pashayan, Kings Park, N. Y.
13 *Surgical Rings. H. A. Shaw, Seattle, Wash.

7. **New Method of Testing Functions of Digestive Apparatus.**—Einhorn attaches solid foodstuffs to glass or porcelain beads, by drawing them through the opening in the bead and tying them on with silk thread. Examination of the beads found in the feces will reveal the indigestible substances, while those which are digestible will have disappeared during their course

through the gastrointestinal tract. In order to test the work of the stomach alone, a thread is attached to the beads, which are placed in a gelatin capsule. At the end of from four to six hours the beads are withdrawn. By these two methods both the digestion in the stomach and in the bowel may be judged. Einhorn sums up the results of his experiments as follows: In healthy individuals catgut and fishbones are digested in the stomach, whereas boiled or raw meat (beef), raw chicken skin, and raw as well as boiled potatoes, do not disappear altogether in this organ. The muscles show a swelling and loosening of the fibers. Raw muscle fiber and chicken skin disappear in the intestines; tendons remain undigested. Raw potatoes show a varying condition, sometimes disappearing entirely, sometimes going through unchanged. Boiled potato usually seems to be digested in the bowel, but the skin of the potato, raw or boiled, remains unchanged. Fats with a very high melting point, such as lard, are not absorbed in the intestine; suet and mutton fat are digested in the bowel. Fishbone is not changed in the intestinal tract. If the intestinal functions are normal, albumin (raw meat), and starch (potato), boiled two minutes, and mutton fat will disappear during their passage through the digestive tract. Disturbances of these functions may be rocognized by the reappearance of food substances attached to the beads. Raw thymus has been used to test the pancreatic function. When the intestinal and pancreatic functions are intact, the thymus will disappear.

8. **What Is the Climacterium?**—Bandler states that although the menopause is generally considered an essential evidence of the climacterium, this is not true. Another erroneous but common view is that after hysterectomy the annoying symptoms of the climacterium are absent if the ovaries be left behind. In point of fact, annoyances of the same nature, often combined with scanty menstruation and with the other evidences of ovarian insufficiency, are often seen in women who have not been operated on, in women at the menopause, or during the climacterium, and even in women who are not near the menopause age. Bandler thinks that we are justified in considering the relative oversecretion of the thyroid in these patients as the pathologic basis, and the probabilities are that ovarian insufficiency means relative hyperthyroidism. The symptoms of diminished ovarian secretion and those of hyperthyroidism are enough alike to warrant the opinion that they are one and the same.

12. **Notes on Cerebrospinal Fluid.**—Pashayan has made a cystologic examination of the spinal fluid in a number of patients, with the object of determining the constancy lymphocytosis in the cerebrospinal fluid in paresis as well as in other mental affections. Among 37 cases of general paresis a marked increase of lymphocytes was seen in 16, a moderate increase in 5; the results were doubtful in 3, and negative in 3. Lymphocytosis was absent in 7 chronic alcoholics, in 6 old syphilitics, in 25 epileptics, in 13 hebephrenics, in 8 katatonics, in 7 maniac-depressive cases, and in 7 paranoiac states.

13. **Surgical Rings.**—The object of Shaw's device is to enable the operator to use his fingers instead of forceps, needle-holders, etc. The device consists of a pair of steel rings with a small segment cut out on the inner (middle finger) side, and a denticulated plate on the outer side (thumb side). These rings fit on the second phalanx of the index finger of each hand. The first and most important use of the ring is in tieing sutures and ligatures. In this case the main advantages are that it is ready for instant use and does not weaken the suture or ligature material, as forceps do, and also avoids cutting of the fingers and consequent infection. It enables the operator to separate adhesions with the fingers, without the aid of forceps, gauze, etc., with the least amount of injury to the tissues, and is especially valuable in separating the hernial sac from the cord, and in varicocele. In grasping and retaining tissues, it is much handier and produces less injury than tissue forceps. In the manipulation of the needle it is valuable both as a holder and as a guide in directing the point of the needle among important structures. Lastly, it enables the operator to handle, with ease, slippery viscera, as the intestines.

New York Medical Journal.

February 10.

14 *Case of Cerebrospinal Meningitis Indicating that It May Be of a Contagious Nature. H. A. Hare, Philadelphia.
15 Should Education on Sexual Matters Be Offered to Youth. E. L. Keyes, New York.
16 *Education in Sexual Subjects. F. C. Valentine, New York.
17 Dietetic Treatment of Chronic Diarrheas. M. Einhorn, New York.
18 *Surgery of the Thyroid Gland. M. Ballin, Detroit, Mich.
19 Displeasing Results of the Mastoid Operation. J. A. Stucky, Lexington, Ky.
20 Contribution to Our Knowledge of the Polioencephalitis Superior (Wernicke Type). J. R. Hunt, New York.
21 Sanatorium Treatment of Pulmonary Tuberculosis, with Brief Description of Work and Results at the State Sanatorium, Ray Brook, N. Y. M. P. Burnham, Ray Brook, N. Y.
22 Early Diagnosis of Gastric Carcinoma. H. Weinstein, New York.

14. **Contagiousness of Cerebrospinal Meningitis.**—Hare cites a case of cerebrospinal meningitis of unusual severity. In less than thirty-six hours the patient received over 25,000 units of diphtheria antitoxin. The patient died of circulatory and respiratory failure about forty-four hours after the beginning of his illness. Two days afterward Hare was called to see the physician who had had charge of this patient. He found him with slightly injected conjunctivæ and suffering from a condition of discomfort in the back and legs, which did not, however, amount to pain. No rigidity was present in any part of the body. On the evening of the same day this second patient was unconscious and in violent convulsions, accompanied by attempts to vomit which were prevented by the tightly clenched jaws. The Kernig sign was present, the hands were clenched with the thumbs in at the palms, the head was rotated sharply to the right, and there was also a conjugate deviation of the eyes, to the right, with fixation of the eyeballs. The physician died about eight hours after the development of distinct meningeal symptoms and nineteen hours after his first symptoms developed. Hare considers these two cases of interest not only because of their violence, but also because it seemed that the infection was transferred directly from the first case to the second. Another point of interest is that the first patient had visited four days previous to his illness in two cities which at that time were the seat of an epidemic of cerebrospinal meningitis. Still another point of interest is that a medical student who helped take care of the patient developed a violent tonsillitis, with fever and pain throughout the body. Hare himself suffered from a chill, fever of 102, and severe aching in the neck, back and limbs four days after seeing the first patient and within twelve hours of seeing the second one.

16. **Education in Sexual Subjects.**—Valentine summarizes his paper as follows:

1. Sexual physiology and hygiene need not be formally taught girls, save in the exceptional instances in which the genesic impulse is prematurely developed.
2. Sexual physiology and hygiene should be taught every boy, when mental and sexual puberty make him capable of beneficially utilizing the knowledge.
3. The nature and scope of instruction on sexual subjects should be regulated according to each pupil's ability properly to appreciate the warnings inseparable therefrom.
4. The age at which a person may safely be instructed in sexual subjects is that age at which, in each individual case, such instruction becomes necessary for the purposes of moral and physical prophylaxis.
5. The individuality of the parent, physician or teacher should be the guide to the choice of one or the other as the exponent of the facts.
6. Educational institutions may be utilized for instruction in sexual subjects, but such instruction must be given to small groups of pupils selected because of their mental parity as nearly as may be.
7. Text-books on elementary hygiene should not contain chapters on sexual physiology. Those charged with imparting instruction on sexual subjects should be provided with separately printed chapters on the physiology and hygiene of these matters. These separately printed chapters could then be given with the greatest discretion to such pupils only whose mental development would preclude their misusing the information derived therefrom.

18. **Surgery of the Thyroid.**—Ballin's experience is limited to 6 cases. He considers that 3 patients are cured, 2 very much improved, and one slightly improved. All these cases were very bad ones, with pulse over 140, severe nervous symptoms and intestinal disturbances. In each of these 6 cases he did a thyroidectomy, removing half or more of the diseased gland. He believes that this should be the operation of choice, if internal treatment fails.

Boston Medical and Surgical Journal.

February 8.

23 *The Problem of Psychiatry in the Functional Psychoses. (Continued.) E. Cowles, Boston.
24 *Vaginapexy. W. P. Graves, Boston.
25 Contractile Processes in the Lung as a Result of Phthisis, with Reference Especially to Their Production of Permanent Dextrocardia. H. B. Dunham, Rutland, Mass.

23.—This article appeared elsewhere.

24. **Vaginapexy.**—This operation, which is used in cases of extreme vaginal relaxation, such as prolapse, incomplete and complete procidentia and advanced cystocele, is described by Graves (the operation was devised by W. H. Baker) as follows: The patient is placed in the Trendelenburg position and a small median abdominal incision is made. The intestines are packed away with gauze in order thoroughly to expose the posterior cul-de-sac. Beginning first on the right side, a point is selected a little posterior and external to the peritoneal reflexion of the posterior cul-de-sac from the wall of the uterus. This point is then seized with the bullet forceps, the forceps being carried deep enough in order actually to seize the wall of the vault of the vagina. In order to ascertain whether or not the wall of the vagina is included within the teeth of the bullet forceps it is a safe plan to have an assistant insert his finger in the vagina so that he can give information as to whether the vagina is really being drawn up by the traction of the bullet forceps. When it is found that the vagina is firmly grasped, a silk suture, preferably No. 10 braided silk, is passed through the tissue to take the place of the bullet forceps. The suture is then passed up through the peritoneum, rectus muscle and fascia of the abdominal wall about one-half to three-quarters of an inch from the incision. It is then passed back again into the abdominal cavity and included with the other end of the suture in a pair of snaps. The same procedure is then carried out on the left side and the two sutures tied, drawing the vagina firmly up to the anterior abdominal wall and completely anteverting the uterus, the knots being thus left within the abdominal cavity. The abdominal incision is then closed with great care, in layers. In passing the suture through the floor of Douglas' pouch Graves has found it advantageous to employ the stitch devised by Max Broedel for the suspension of prolapsed kidneys, as it gives far greater tensile strength. It is necessary, however, to avoid carrying the suture through into the vaginal cavity.

Lancet-Clinic, Cincinnati, Ohio.

February 10.

26 Diagnosis of Some Painful Affections of the Feet. C. R. McClure, Cincinnati.
27 A Few Ethical Thoughts. G. B. Orr, Cincinnati.
28 Contract Practice for Liability Insurance Companies. R. P. Tate, Cincinnati.
29 Experiences with the X-Ray in the Treatment of Malignant Tumors. A. M. Hayden, Evansville, Ind.

Cleveland Medical Journal.

January.

30 Paris Congress of Tuberculosis, 1905. J. H. Lowman, Cleveland.
31 *Two Unusual Complications of Labor. F. S. Clark, Cleveland.

31. **Unusual Complications of Labor.**—In the first patient mentioned by Clark, the lower portion of the vagina was entirely separated from the upper by a transverse membrane. The anterior attachment of the membrane was about one and a half inches and the posterior about two and a half inches from the vulva. Pressure against the membrane showed it to be firm, except at one point toward the left side, which yielded slightly. The color of the membrane was the same as that of the vaginal mucosa. Its thickness was about that of ordinary blotting paper. The second case was one of congenital displacement of the urinary bladder. The cavity of the pelvis was well filled with what appeared to be a cystic tumor attached to the left pelvic wall. The tumor disappeared on catheterizing. The catheter had to be passed upward, inward, to the left and then downward before the urine would escape.

Medicine, Detroit, Mich.

January.

32 Hepatic Therapeutics. H. Richardson, Baltimore.
33 *Economic Aspect of the Modern Treatment of Tuberculosis. J. W. Pettit, Ottawa, Ill.
34 *Fractured Femur Treated by the Ambulatory Method. R. S. Dubs, Chicago.
35 Scopolamin and Morphin Anesthesia in Ophthalmic Surgery. G. F. Suker, Chicago.
36 *Diagnosis of Neurasthenia. F. X. Dercum, Philadelphia.
37 *Early Arrest of Infection. E. Laplace, Philadelphia.
38 Study of Tropical Medicine; Its Aim, Its Method and Its Scope. F. C. Wellman, Benguela, E. Africa.
39 Plea for the More Rational Use of Diphtheria Antitoxin. B. F. Royer, Philadelphia.
40 Masturbation Among Women. W. L. Howard, Baltimore.

33.—See abstract in THE JOURNAL, Dec. 16, 1905, page 1899.

34. **Fracture of Femur.**—Dubs reports a case of oblique fracture of the middle third of the femur in which there was a marked tendency to shortening. The ambulatory method of treatment was chosen. At the end of two weeks and five days the patient was allowed to get up and walk about with crutches, elastic traction being still applied. At the end of four weeks and five days traction was dispensed with. Five weeks and two days after the accident the patient was allowed to discard the crutches most of the time. Eight weeks after the accident the splint was removed altogether. Skiagrams taken one year after the date of the fracture show a perfect union and no deformity of bone.

36.—See abstract in THE JOURNAL, Dec. 16, 1905, page 1901.

37. **Early Arrest in Infection.**—Laplace states that the problem to be solved is the removal, so far as possible, of all the organisms which have entered the lymph vessels and are already beyond the reach of an antiseptic. Laplace accomplishes this by a squeezing or milking process of the wound. The parts around the wound are pressed on and a certain amount of serum exudes. This serum contains the staphylococcus and streptococcus, even after the wound has been squeezed four or five times, showing that the organisms invaded the lymphatics. When the hemorrhage stops, Laplace cauterizes the wound with pure carbolic acid. This causes a fresh hemorrhage. Further squeezing facilitates the flow of blood, and also increases the subsequent flow of serum or lymph. A dry dressing completes the treatment. If the case presents evidence of a marked and spreading infection, Laplace also scarifies the reddened area in addition to the procedures just mentioned. When the lymph channels are thoroughly emptied an ice-cold antiseptic solution is applied to the parts for the purpose of giving direct entrance of the antiseptic into the affected lymph channels laid open by the scarification, in this way destroying the germs which may linger within the lymphatics. The solution used consists of one part of bichlorid of mercury to five parts of hydrochloric acid and 1,000 parts of water. Should pain result from this application the solution is made weaker. Internally, Laplace administers from 10 to 20 drops of tincture of chlorid of iron. He has followed this method of treatment in the case of minor wounds, such as infective cuts, scratches, excoriations, infected pimples, and erythema from starting erysipelas, for a number of years, and has always succeeded in checking the infection.

Wisconsin Medical Journal, Milwaukee.

January.

41 *Diagnostic Value of Cystoscopic Examinations. W. A. Gordon, Jr., Oshkosh, Wis.
42 *Pathology and Non-Surgical Treatment of Injuries to the Stomach. W. Becker, Milwaukee.
43 When and How to Begin Substitute Feeding. L. Boorse, Milwaukee.
44 *Case of Malformation of the Duodenum. C. J. Habhegger, Watertown, Wis.

41.—See abstract in THE JOURNAL, July 1, 1905, page 67.

42. **Id.**

44. **Malformation of Duodenum.**—The malformation reported by Habhegger occurred in a newborn infant that lived about five days. On the lesser curvature of the stomach there was a deep furrow which divided the organ into two parts, and which, if a little more marked, would have produced the anomaly known as the hour-glass stomach. Just below the pylorus, which was normal, the stomach emptied into a cul-de-sac about the size of an orange which had no communication with the rest of the intestinal tract. This cul-de-sac was lined by a mucosa which differed from that of the stomach and corresponded with that of the duodenum. That part of the intestinal tract corresponding to the descending portion of the duodenum commenced in a narrow part as a continuation of the common duct. Clinically the condition present was identical with pyloric stenosis.

Therapeutic Gazette, Detroit, Mich.

January 15.

45 *Value of Ergot in Obstetrics. E. P. Davis, B. C. Hirst, J. C. Cameron and others.
46 Methods for Diagnosticating Diseases of the Stomach. J. Sailer, Philadelphia.
47 Hyperesthesia of the Gastric Mucous Membrane and Its Treatment. J. D. Steele, Philadelphia.
48 Surgical Aspects of Gastric Dyspepsia. J. B. Deaver, Philadelphia.
49 Subcutaneous Injection of Paraffin for Nasal and Other Deformities, and the Submucous Injection for Atrophic Rhinitis. A. B. Kirkpatrick, Philadelphia.

45. **Value of Ergot in Obstetrics.**—Davis states that he is accustomed to use ergot in some form in the great majority of cases of labor. The only contraindication to its employment is excessive hemorrhage with a depleted condition of the vessels and a feeble heart. Strychnia is given with the ergot, because it rouses the ganglia of the uterus and stimulates the patient's nervous system. Davis never gives more than two drams of ergot by mouth at one time. He has never witnessed any untoward results from the use of ergot. Hirst uses ergot as a routine practice in all cases of labor as soon as the child is born. A very irritable stomach and persistent vomiting are contraindications to its use, but even in these cases, after the labor is over, Hirst has succeded in having the ergot retained. If it has been necessary to anesthetize the patient he gives a deep hypodermic injection of ergot into the thigh as soon as the uterus is evacuated. In the case of twins, he has been in the habit of giving a dram of ergot by mouth after the birth of the first child, if there is nothing about the condition of the second child to obstruct labor. Cameron uses ergot in all cases of labor, unless specially contraindicated, after the uterus is emptied. He has never seen any untoward effects or accidents attributable to the use of ergot.

Ohio State Medical Journal, Columbus.

January.

50 Surgical Treatment of Gastric Ulcer. W. D. Haines, Cincinnati.
51 Catarrh of the Stomach. J. D. Dunham, Columbus.
52 Maximum Deformity of the Arm with Perfect Function. J. C. Reeve, Jr., Dayton.
53 *Commercial Therapeutics. C. Louy, Toledo.
54 Pruritus Ani. E. A. Hamilton, Columbus.
55 *Scopolamin-Morphin Ethyl-Ether Anesthesia. R. A. Rice, Columbus.
56 Benefits of Medical Organization. W. B. Hedges, Delaware.
57 Typhoid Fever, Etiology and Pathologic Anatomy. H. Blankenhorn, Orrville.
58 Acute Suppurative Osteomyelitis as It Concerns the General Practitioner. D. S. Olmstead, Millersburg.

53. **Commercial Therapeutics.**—Luoy says that when physicians prescribe a preparation which is said to contain certain drugs, without knowing the exact amount of each constituent to the dose or their physiologic action, they are pursuing a course which disregards every teaching prescribed by a reputable medical school. They can not know whether new symptoms, if they should arise, are due to the medicine or to the original condition of the patient. They are in absolute darkness so far as the interest of the patient is concerned. If dangerous symptoms follow such treatment they may be misled in their efforts to control them. The great mass of testimonials which laud many preparations so highly are born of ignorance and the evident desire of the author to see his name in print. Mushroom drug manufacturers, without a grain of medical knowledge, are springing up on every side with wonderful cures for diseases which heretofore have been hopeless cases. Luoy says that a most unfortunate feature of this situation is that some reputable medical journals are advertising this rot to the medical profession. If the profession did not support the manufacturers of this material the manufacturers would not continue in business. Luoy asserts that the tendency of the present, so far as medical therapeutics is concerned, is decidedly non-progressive. If physicians wish to remain true to the interests of their patients, to the profession and to themselves, they will refuse absolutely to prescribe any preparation which is not accompanied by a complete formula of its contents, as well as the amount of each constituent in a given quantity.

55. **Scopolamin-Morphin Ethyl-Ether Anesthesia.**—By carefully investigating the effects of scopolamin-morphin ethyl-ether anesthesia on 150 patients, before and after operation, from the head nurse in charge, from the patients themselves, and by personal observation, Rice found it a very valuable addition to his method of anesthesia, which is as follows: About half an hour before the operation the patient is given 1/100 gr. scopolamin and 1/6 gr. morphin hypodermically. The general anesthesia is begun with bromid of ethyl, which he has used in from 2,000 to 3,000 cases. He always uses the drop method on the Esmarch mask until the air passages become accustomed to the slight irritation; then, when the patient has become unconscious, he pours on the mask about half a dram of the bromid of ethyl and at once covers the mask with gauze or a folded towel. The patient, after a deep inspiration or two, begins to relax, and after two or three more. Rice changes the mask for the ether cone, and in nearly every case, unless an unusually robust man, the patient passes from the ethyl anesthesia to that of the ether without a struggle. In 150 consecutive cases in which he used the scopolamin and morphin, fully 75 per cent. of the patients were scarcely nauseated; about 20 per cent. vomited a dram or two of mucus, and about 5 per cent. vomited freely, this in many instances being doubtless due to an irritable condition of the stomach before the anesthesia.

Ophthalmic Record, Chicago.

January.

59 Two Splinters of Steel Removed from the Interior of an Eye with the Magnet. W. R. Murray, Minneapolis.
60 A Lachrymal Syringe. W. H. Wilder, Chicago.
61 Cataract Caused by a Discharge of Industrial Electricity. E. C. Ellett, Memphis, Tenn.
62 *New Treatment for Trachoma. J. A. Pratt, Aurora, Ill.
63 A New Trial Case. M. D. Stevenson, Akron, Ohio.
64 Complete Absorption of a Pannus Trachomatosus Brought About by Typhoid Fever. F. C. Todd, Minneapolis.

62. **Treatment of Trachoma.**—The treatment employed by Pratt consists in thoroughly massaging the everted lids with boric acid powder. The massage pressure is made by a cotton-wound probe. The partially dissolved powder is allowed to remain under the lids. The eye is bandaged and cold applications are applied. This treatment is repeated after three days and is continued until there is no further evidence of the disease. No scars result and the treatment has been entirely satisfactory to Pratt in about twenty cases in which it was employed.

Archives of Pediatrics, New York.

January.

65 *Unusual Case of Tuberculosis in an Infant. C. W. Townsend, Boston.
66 Plea for a More Prominent Position of Glandular Fever Among Infectious Diseases. A. E. Vipond, Montreal.
67 Typhoid Fever in Children. L. C. Ager, New York.
68 Case of Tumor of Cerebellum with Necropsy. C. F. Judson, and C. D. Camp, Philadelphia.

65. **Unusual Case of Tuberculosis.**—The patient, whose case is reported by Townsend, was the second child of exceptionally healthy parents. The family history was good. The only cases of consumption in the family were remote and occurred in collaterals. The food of the child was breast milk for the first seven months, at the end of which cow's milk, modified with cereal water, was given. This milk was of the best, coming from cows that were frequently tested for tuberculosis and whose milk was used especially for infants. The infant received no other food. At the age of nine months the child was suddenly taken sick with fever and vomiting. The fever continued for over two months and ended in death. During all this time nothing was found on physical examination, except a slight otitis media of one ear. The drum was punctured and a thin serous fluid escaped. Several times in the course of the disease the ears were examined, but nothing abnormal was found, so that otitis as a cause of the fever was ruled out. In this way several other causes of fever were eliminated. The fever varied irregularly from 100 to 104 F. and was often higher in the morning than at night. On several occasions it became normal and once or twice it was subnormal. The general course of the fever was lower during the last two weeks of the disease. At the end, however, it mounted rapidly above 106 F. The infant's digestion was good during nearly the whole course of the disease. During the last month, however, vomiting and disinclination to take food became prominent features. Bile was often vomited. There appeared to be no

evidence of intestinal or of gastric indigestion, or of accumulation from pyloric stricture, and it was believed that the vomiting was reflex from the fever. Thorough evacuations with calomel had no effect on the fever. The autopsy showed extensive tuberculosis throughout the peritoneal cavity.

Indiana Medical Journal, Indianapolis.
January.

69 *Observations of Tuberculosis Sanatoria in the West. T. Potter, Indianapolis.
70 *The Cigarette; Its Relation to Mental and Nervous Diseases. W. B. Fletcher, Indianapolis.

69. **The Tuberculosis Sanatorium.**—Potter, secretary of the Indiana state tuberculosis commission, presents the following conclusions arrived at by the committee as to the institutional treatment of tuberculosis: First, the sanatorium plan has decided advantages over any other for most cases. Second, this plan of treatment does not require very expensive buildings nor an elaborate plant, provided the chief purposes of the plan are kept in view. Third, the method and skill of the management are of more importance than the material equipment. It is the men behind the guns who contribute most to success. Fourth, the great majority of the patients easily, cheerfully and quickly fall into line with the regulations and life of a well-managed sanatorium, just as do the great majority of students in an educational institution. Fifth, a notable spirit of cheerfulness and hopefulness prevails in a well-managed sanatorium. Sixth, in a large proportion, about 70 per cent., of cases of early pulmonary tuberculosis, the disease may be arrested and the patients returned to useful activity by this plan of treatment, intelligently and faithfully carried out. Seventh, it was the universally expressed belief by the medical officers of western sanatoriums visited by the commission that, at least approximately, good results could be obtained by a similar plan of treatment in any climate. Eighth, the committee was everywhere impressed by the emphasis put on the educational value of these sanatoriums in the crusade against tuberculosis. Ninth, everywhere and always in these institutions tuberculosis is emphasized as being an infectious disease. The most stringent precautions, therefore, are taken against the spread of this infection. These measures, very simple and easily practicable when understood, practically insure against danger. It has come about, therefore, that one of the places of greatest safety against tuberculous infection, among the habitations of men, is the sanatorium for the treatment of this dread disease. All the inmates evidently feel so, because they make it so.

70.—See abstract in THE JOURNAL, Nov. 4, 1905, page 1436.

Columbus Medical Journal.
January.

71 County Society. J. C. Larkin, Hillsboro, Ohio.

Journal of Nervous and Mental Disease, New York.
January.

72 *Two Unusual Tumors of Brain. H. C. Gordinier and H. W. Carey, Troy, N. Y.
73 *The Association of Epilepsy with Muscular Conditions Fitting Best into the Cadré of the Myopathies. A. Onuf, Sonyea, N. Y.
74 Multiform Tic Including Automatic Speech and Purposive Movements. M. Prince, Boston.

72. **Two Unusual Brain Tumors.**—The first case reported by Gordinier and Carey was a multiple cylindroma of the base of the brain, involving the second, third, fourth and eighth cranial nerves, and producing symptoms closely simulating a tumor of the quadrigeminal bodies. Death resulted from exhaustion. The second case was a neuroepithelioma of the choroid plexus of the fourth ventricle, growing dorsally and producing symptoms characteristic of a tumor of the medium lobe of the cerebellum. There was no history of having received an injury to the head.

73. **Epilepsy and Myopathies.**—Onuf reports 6 cases of epilepsy in which the patients presented partly muscular atrophies, partly defective muscular action without clearly demonstrable atrophy, but with definite distribution of these disturbances, manifested, on the whole, as follows: Wing-like standing off of the scapulæ, due, apparently, chiefly to weakness of the trapezius, possibly also of the serratus magnus, rhomboideus, and levator anguli scapulæ muscles; atrophies of the scapular muscles in a strict sense, namely, the infraspinatus and the supraspinatus; also occasionally of the deltoids and other muscles of the shoulder joints; lordosis of lumbar spine in erect position, disappearing in sitting position, a phenomenon clearly explained by Gowers in "pseudo-muscular hypertrophy" as due to weakness of the extensors of the hip, causing an inclination of the pelvis forward and compensatory bending backward to the body; pes valgus; involvement of the facial muscles (2 cases only); electrical changes manifested most frequently by a reversal of the galvanic formula, particularly in the deltoid muscles; fibrillary twitchings (2 cases). This muscular symptom-complex was not present in all cases alike nor in the same degree. In some cases the lordosis was chiefly developed, in others the wing scapulæ; and the flatfoot was present in all cases but one; the facial involvement was found in only 2. Qualitative galvanic changes were found in at least 4 cases; fibrillary twitchings in 2. Onuf states that the distribution of the muscular disturbances conforms best with that of the myopathies, but the presence of qualitative electrical changes (reversal of the galvanic formula) found in at least 4 cases, and the presence in 2 cases of fibrillary twitchings, speak rather against it. Of interest is the association of the malady with epilepsy—an association which Onuf has not found mentioned in any of the familiar text-books on nervous diseases. The interesting question arises whether or not a case of epilepsy thus complicated can be called idiopathic.

Northwest Medicine, Seattle, Wash.
January.

75 Early Diagnosis of Tuberculous Disease of Tonsils, Pharynx and Larynx. J. A. M. Hemmeon, Seattle, Washington.
76 Early Diagnosis of Tuberculosis of Bones and Joints. P. W. Willis, Seattle, Wash.
77 Early Diagnosis of Tuberculosis of the Peritoneum and Female Genitalia. W. M. Karshner, Puyallup, Wash.
78 *Early Diagnosis of Tuberculosis of the Urinary Tract and Male Genital Organs. G. W. Hawley, Seattle, Wash.
79 *Acute Atypical Pulmonary Tuberculosis. S. H. Johnson, Bellingham, Wash.
80 Tuberculin as a Diagnostic Agent. W. R. M. Kellogg, Seattle, Wash.

78. **Tuberculosis of Urinary Tract and Male Genital Organs.**—Hawley suggests the following rules: 1. In all cases of hematuria (especially transient hematurias of doubtful cause), always bear in mind the possibility of tuberculosis. 2. Every cystitis, not due to the gonococcus or infection from without, should be considered suspicious of tuberculosis and be subject to careful observation. 3. In all suspected cases the patients should be subjected to thorough and repeated examinations. 4. Until a positive, simple method is at hand for identifying the tubercle bacilli in the urine we are not warranted in claiming their presence, except when found in large numbers, unless we have taken steps to procure a urine free from smegma bacilli. 5. In all suspicious cases evidence of tuberculous lesions in other parts of the body should be sought. 6. When the slightest doubt remains concerning any case the tuberculin test should be used. 7. A diagnosis is never complete until the source of infection has been traced.

79. **Acute Typical Pulmonary Tuberculosis.**—The previous history of Johnson's patient shows that she had suffered from the ordinary diseases incident to childhood. While returning home from a party she became wet and contracted what she thought was a severe cold. For two weeks following she suffered from shortness of breath on much exertion, loss of appetite, general depression, and pain over her left side, not localized. Her temperature was 98 F.; pulse 110 and feeble; respiration was rather hurried; there was no cough and no expectoration; moderate dyspnea; slight cyanosis. On auscultation no râles were detected, and percussion revealed no areas of dullness. The tongue was slightly coated, bowels regular, urine normal. The pain complained of over the left side of the chest, and which at times extended down the anterior part of the left thigh, was diagnosed as neuralgia of the intercostal and anterior crural nerves. The patient was put on a tonic treatment and advised to take a vacation of a month, which she did. During this time her physical condition was carefully studied, inasmuch as no positive diagnosis had yet been made. At the end of a month she was sent to the hospital.

By this time the symptoms were nearly all aggravated. A thorough physical examination revealed nothing more abnormal and the case remained undiagnosed. After diligent search for the tubercle bacilli the results were negative. Seven weeks after her admission to the hospital a third microscopic examination of the sputum revealed an enormous number of tubercle bacilli and a diagnosis was made of acute pulmonary tuberculosis.

Western Medical Review, Lincoln, Neb.

January.

81 *Trypanosomes and Disease. H. B. Ward, Lincoln.
82 *Variations from Routine Necessary in Some Operations for Inguinal Hernia. J. P. Lord, Omaha.
83 Acute Endocarditis; Its Etiology and Symptomatology. C. W. M. Poynter, Lincoln.
84 *Four Years of Experience with Scopolamin-Morphin as a General Anesthetic. B. J. F. Getzlaff, Sutton.

81. Trypanosomes and Disease.—Ward reviews what is known as trypanosomes, and points out their relationship to disease in the human species. Speaking of the *Spirochæta pallida*, he says that it would be natural to expect that this group of flagellates, which contains so many disease-producing organisms that attack lower animals, should yet furnish the explanation of the etiology of human diseases hitherto unexplained. In maladies which are evidently of germ production, it is more likely that the cause is to be found among the unstudied protozoa rather than that the refined technic of the modern bacteriologist has been unsuccessful in detecting the plant germ which produces it.

82. Variations in Hernia Operations.—Lord considers that the Bassini operation for inguinal hernia occupies first place, because it has stood the test of time. In exceptional cases, however, he thinks that the newer methods are to be preferred because departure from routine methods is necessary in some cases of inguinal hernia.

84. Scopolamin-Morphin Anesthesia.—For four years Getzlaff has employed this method of producing anesthesia, following the suggestions of Korff. He says he has yet to see the first case of headache, vomiting, disturbed digestion, retention of urine, and especially intestinal paresis, after abdominal operations, although occasionally, in very cholemic patients and after insufficient preoperative preparations, a peculiar muddy discoloration of the skin and a not very agreeable so-called bilious smell emanating from the patient but soon passing off, has been observed by him. The ages of his patients ranged from 10 to 80 years, and the number operated on is over 90, with only one death, which occurred twelve weeks after the operation from other causes. His series includes about 40 abdominal sections.

Physician and Surgeon, Detroit and Ann Arbor, Mich.

November.

85 Review of the Life of Ludwig. W. P. Lombard, Ann Arbor.
86 Cases of Heart Disease. G. H. Cattermole, Boulder, Colo.
87 Renal Calculus. C. G. Darling, Ann Arbor.

Ophthalmology, Milwaukee, Wis.

October, 1904.

88 Consequence of Ophthalmic Error. W. Schoen, Leipsic, Germany.
89 Pathologic Results of Dextrocularity and Sinistrocularity. G. M. Gould, Philadelphia.
90 Hysterical Asthenopia. H. M. Fish, New Orleans.
91 Saccharine Saline Injections in Ophthalmic Practice. L. W. Fox, Philadelphia.
92 Blepharorrhaphy (Tarsorrhaphy). A. B. Hale, Chicago.
93 Acute Dacryoadenitis. A. C. Snell, Rochester, N. Y.
94 Relation of Diseases of the Eye to Those of the Teeth. W. Rebar, Philadelphia.

January, 1905.

95 Congenital Word Blindness. W. E. Bruner, Cleveland.
96 Binocular Fixation and the Hypothesis of the Dominant Eye. P. H. Fridenberg, New York.
97 Cases of Retinal Separation. A. Greenwood, Boston.
98 Comparative Tests of Colored Glass Used in Railway Signaling. N. M. Black, Milwaukee.
99 Improved Series of Wools for the Detection of Subnormal Color Perception, Color Blindness. C. A. Oliver.
100 Medicolegal Relations of Ocular Injuries, Pensions and Insurance Rates and a Reference to a Scientific Plan for Estimation of the Loss of Earning Ability. H. V. Würdemann, Milwaukee.

April, 1905.

101 Epithelioma of the Lid: Removal by Dissection and X-Ray Treatment. W. H. Snyder, Toledo.
102 Peritomy for Diffuse Corneitis and Other Affections of the Cornea. S. Snell, Sheffield.
103 Sarcoma of the Orbit. E. O. Belt, Washington.
104 Elephantiasis of the Upper Lid. H. Harlan and R. H. Johnston, Baltimore.
105 The Question of Iridectomy in Glaucoma Simplex. F. E. Cheney, Boston.
106 Intraocular Tuberculosis. W. C. Posey, Philadelphia.
107 Remarks on Molluscum Contagiosum. E. H. Oppenheimer, Berlin.
108 Treatment of Pyogenic Infection of the Eyeball. A. M. Ramsay, Glasgow.

July, 1905.

109 Astigmatism After Cataract Extraction as Modified by the Conjunctival Flap. C. F. Clark, Columbus.
110 Ophthalmometry. E. E. Gibbons, Baltimore.
111 Dionin (ethyl-morphin hydrochlorate) in Ocular Therapeutics. L. Connor, Detroit.
112 Local Anesthetics and Analgesics in Ophthalmic Practice. B. F. Church, Los Angeles, Cal.
113 Lesions of High Myopia Clinically Considered. H. F. Hansell, Philadelphia.
114 Microphthalmos, Persistent Pupillary Membrane, Anterior Synechia and Central Congenital Opacity of the Cornea. J. W. Stirling, Montreal.
115 Kuhnt's Conjunctival Flap. G. F. Suker, Chicago.
116 Nitric Acid Burn Involving the whole External Portion of the Eyeball; Much of the Conjunctiva Replaced by Epithelial Mucous Grafts Taken from the Lower Lip; Recovery with Useful Vision. C. A. Veasey, Philadelphia.

October, 1905.

117 Paralysis of Divergence. A. Duane, New York.
118 Paralysis of the Upward Movements of Both Eyes. W. Zentmayer, Philadelphia.
119 Tumors of the Conjunctiva and Cornea. J. M. Ray, Louisville, and F. H. Verhoeff, Boston.
120 Primary Melanotic Sarcoma of Eyelids. R. H. Johnston, Baltimore.
121. Id. H. V. Würdemann, Milwaukee.
122 Ophthalmology in Japan. M. Inouye, Tokio, Japan.
123 Anatomy of the Eye According to the Ancients. E. E. Blaauw, Buffalo.

January, 1906.

124 History of the Ocular Treatment of Migraine and Headaches. O. Wilkinson, Washington.
125 What Are the So-Called Reflexes Which Can Properly Be Referred to Eyestrain? L. Howe, Buffalo.
126 Symptoms of Ametropia. H. F. Hansell, Philadelphia.
127 Retinal Hemorrhages in Apparently Healthy Eyes. E. W. Stevens, Denver.
128 Description of a Single Stitch Operation for Advancement of the Exterior Ocular Muscles. C. A. Oliver, Philadelphia.
129 New Punch for Removing Membranes from the Postpupillary Space in Traumatic or Secondary Cataract and for Making an Artificial Pupil. M. D. Stevenson, Akron.
130 Intraocular Irrigation. J. A. Lippincott, Pittsburg, Pa.
131 Euphthalmin Conjunctivitis. C. J. Kipp, Newark.

FOREIGN.

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal.

January 27.

1 *Carcinoma of the Breast and Its Spread into the Lymphatics. C. B. Lockwood.
2 *Swellings of the Breast, their Diagnosis and Treatment. A. Clark.
3 *Enucleation of the Prostate for Hemorrhage. W. Thomson.
4 *Ventrofixation. W. J. Sinclair.
5 *Immediate and Remote Results of the High Operation for Varicocele. E. M. Corner and C. A. R. Nitch.
6 Secondary Carcinomatous Growths Simulating Tuberculous hip-joint Disease and Miliary Tuberculosis. R. E. Lord and C. W. Buckley.
7 *Simultaneous Excision of Two-thirds of the Stomach, the Anterior Face of the Pancreas and the Transverse Colon for Carcinoma. C. P. Childe.
8 Accurate Delineation of Tuberculous Foci in Early Disease of the Kidney in Women Before Operation is Undertaken. H. Fenwick.

1. Spread of Carcinoma.—Lockwood claims that the rapidity with which cancer spreads into the lymphatics depends to a large extent on the position of the primary growth. When that is situated within a hollow muscular organ, such as the urinary bladder or gall bladder, the pause may be a long one; but when the growth is in the mammary gland, in the tongue, or in the pharynx, he believes that there is hardly any interval between the onset of the growth and its spread into the neighboring lymphatics. In cancer of the breast he has found that the tumors in the lymph glands soon grow larger than the tumor from which they sprung, even though the presence of the growths in the lymph vessels can not be seen during the operation, except, occasionally, in very advanced cases. Lockwood advises the use of the microscope in all cases. He considers the duct carcinoma to be as malignant as any other variety. He also thinks it probable that cancer may cross in the lymph channels from one breast to the other, and cites one instance of carcinoma spreading against the lymph stream.

2. Swellings of the Breast.—Clark discusses the differential diagnosis of neuralgia of the breast, mastitis, abscess, cysts,

and benign and malignant tumors. He considers the following the ideal way of examining a breast that is the seat of a swelling:

The patient should preferably be seated in an ordinary chair, with her arms hanging down and the doctor seated opposite. If for any reason she has to be in bed, she should be placed flat on her back, with her head and shoulders slightly raised, and her arms lying beside her, the doctor standing at the left side of the bed; a shawl may be thrown loosely over the shoulders, otherwise the upper part of the body should be completely uncovered. Inspection is the first thing. The surgeon looks at the two breasts, noticing particularly any enlargement of either, or any puckering of the skin, also any alteration in the normal appearance of the nipple, and whether the two nipples are exactly opposite one another. He then places his hand flat on the affected breast, and carefully feels it all over. If he detects no tumor by manipulating in this way, he may be satisfied that there is not one. Should he feel a tumor, he will first notice whether it is tender or not, then satisfy himself whether it is circumscribed or diffuse; then, by lightly moving his hand laterally to and fro, whether the skin is adherent to it; then whether it is adherent to the pectoral muscle; and to ascertain this it is well for an assistant to support the arm and alternately to relax and to tighten the pectoral. The next thing is to examine the tumor with the two forefingers, ascertain its relative hardness and to decide whether there is fluctuation or not, and, lastly, the axilla and supraclavicular region should be examined for enlarged glands. In doing this the arm should be supported, and the muscles forming the axilla relaxed, and two fingers of the right hand employed. The whole axilla should be felt, more particularly the outer part, as there are usually glands found enlarged along the line of the axillary vein, if there are any. The forefinger should carefully feel the hollow above the clavicle and the back edge of the sternomastoid muscle. It is desirable also to examine the axilla of the unaffected side, as some people have enlarged glands from another cause, and the enlargement on the affected side may not be due to the condition of the breast.

3. **Enucleation of Prostate for Hemorrhage.**—Thomson advocates the removal of the prostate for hemorrhage that can not be controlled otherwise. He cites one case in support of his contention.

4. **Ventral Fixation.**—Sinclair states that the operation of ventral fixation of the uterus, when properly carried out, is a most valuable one in the treatment of displacements of the uterus.

5. **High Operation for Varicocele.**—Corner and Nitch detail the results in 100 cases in which the high operation for varicocele was performed. After exposing the cord by a short incision, the pampiniform plexus was isolated, ligated in two places, about two inches apart, and the intervening portion excised. In some cases the two ends were approximated by a suture which transfixed the stumps. In 2 per cent. of the cases some recurrence of the varicocele was noted, but in neither instance was there any pain or discomfort. An inguinal hernia was present in 2 per cent. Two patients had a spermatocele. In 8 per cent. there was a tense hydrocele, and in 15 per cent. there was present a flaccid hydrocele which did not cause any symptoms. In 84 per cent. the sensibility of the testes was unaltered; it was increased in 9 per cent., decreased in 5 per cent., and lost in 2 per cent. Four patients stated that they were worse after the operation. Twenty-six reported themselves as being neither better nor worse; 70 patients were definitely improved and well satisfied.

7. **Extensive Operation for Carcinoma.**—In the case reported by Childe the greater portion of the transverse colon was excised, not because it was involved in the disease, but on account of the necessity of sacrificing its blood supply in order to get wide of the growth. About one-third of the stomach, at the cardiac end, was not removed so as to permit of a gastrojejunostomy. The growth infiltrated the anterior and posterior walls of the stomach for about half their extent. The pancreas was firmly attached to the stomach. The four openings made in the gastrointestinal tract were all closed with a double row of continuous silk suture. No button or bobbin of any kind was used. Five weeks after the operation the patient was up and about, taking ordinary solid food of digestible quality, and not in too large quantity, and was rapidly gaining in weight and strength.

The Lancet, London.

January 27.

9 "Acute Abdomen." W. H. Battle.
10 Institution and Sanatorium Treatment of Pulmonary Tuberculosis in Relation to Large Centers of Population. E. F. Trevelyan.
11 Evolution of Operative Gynecology. D. L. Roberts.
12 *An Experimental Investigation of the Budde Process for the Preservation of Milk. R. T. Hewlett.
13 Two Cases of Leukemia Treated by the Roentgen Rays. W. I. Bruce.
14 *Interrupted Circulation as a Therapeutic Agent. W. Ewart.
15 Experiments in Hypnosis. E. Ash.
16 Acid Extract of the Duodenal Mucous Membrane as a Remedy in Diabetes Mellitus. J. H. Abram.
17 *New and Easy Process of Triple Staining for Cytological and Histological Purposes. V. Bonney.
18 Importance of a Strictly Limited Lactation. A. D. Fordyce.

12. **Budde Process for Preserving Milk.**—With a view to testing the efficiency of the Budde process for the preservation of milk, Hewlett conducted a series of experiments, from the results of which he draws the following conclusions:

1. All the non-sporing organisms, pathogenic and non-pathogenic, dealt with—viz., the *Bacillus tuberculosis*, the *Bacillus diphtheriæ*, the *Bacillus acidi lactici*, the *Bacillus typhosus*, the *Bacillus coli communis*, the *Bacillus dysenteriæ*, a paratyphoid bacillus, the *Micrococcus pyogenes aureus* and the cholera spirillum—are destroyed by the process.

2. Sporing forms—viz., the *Bacillus anthracis*, the *Penicillium glaucum*, the *Bacillus subtilis*, and the *Bacillus mycoides*—are not destroyed by the process although reduced in numbers, the inference being that the vegetative forms are destroyed but the spores are not destroyed.

3. Although the heating *per se* may be efficient in destroying certain non-sporing organisms—e. g., the *Bacillus diphtheriæ*, the *Bacillus typhosus*, and the cholera spirillum—it is not so in all cases. Thus in one experiment the *Bacillus typhosus* and the *Micrococcus pyogenes aureus* survived the heating when no peroxid was added, and under similar conditions the *Bacillus acidi lactici* survived in the two experiments in which this was tested.

4. The same fact is strikingly shown by the effect of "Buddeising" on the natural milk—*i. e.*, the milk without added micro-organisms. The reduction in numbers effected by heating alone is far less than with "Buddeising."

5. "Buddeised" milk is practically indistinguishable from untreated milk in taste, odor, appearance, and in the rising of the cream. No increase in acidity is caused by the treatment.

6. "Buddeised" milk will keep perfectly sweet and apparently unaltered in odor, taste, and appearance for at least from eight to ten days in hot weather and for a still longer period in cold weather.

7. In milk obtained in the ordinary way without special precautions the micro-organisms are reduced by the Budde process over 99.9 per cent. In the milk kept at room temperature the small residuum of living micro-organisms multiplies daily and ultimately (after from 12 to 14 days) may cause the milk to go bad.

8. The distribution of the "Buddeised" milk in closed bottles is in itself a great improvement on the routine system of distribution in open vessels.

9. The method excludes all possibility of adulteration of the milk by the vendor before it reaches the consumer.

10. Properly carried out, the whole of the added hydrogen peroxid is decomposed at the end of the process and no trace of it can be detected in the treated milk.

The principle of the Budde process is as follows: The milk is obtained in as cleanly a condition as possible, and if it has to be kept for any time before treatment it is efficiently chilled, but usually it is treated soon after milking. A proper proportion of peroxid of hydrogen is added to the milk and the mixture is heated to from 51 to 52 C. for at least three hours. A temperature below 48 C. is not efficient and one above 55 C. should be avoided as this tends to induce changes in the milk. With the aid of the heating the hydrogen peroxid is completely decomposed into water and oxygen by an enzyme (catalase) present in the milk, and the oxygen at the moment of liberation being in a nascent condition acts as an efficient germicide. At the end of the process the whole of the hydrogen peroxid should have been decomposed, provided the right proportion has been added, so that no antiseptic remains, a small but inappreciable addition of water has been made to the milk, and the majority of the micro-organisms have been destroyed. The amount of hydrogen peroxid required to obtain this result is about 15 c.c. of a 3 per cent. solution per liter of milk, so that the quantity of water added to the milk amounts to about 1.5 per cent., which, on a basis of 3 per cent. of fat, would reduce the percentage of fat to 2.95 in the treated milk, a reduction in the percentage of fat of about 0.05, an amount which may be regarded as negligible. The milk is treated in bulk and immediately bottled with suitable precautions and supplied to the public in the bottles, a fact which alone should commend it. The milk so treated is practically unaltered in appearance and flavor, the cream rises as usual, all ordinary non-sporing pathogenic germs are destroyed, and the milk will keep sweet for at least eight or ten days in hot weather.

14. **Interrupted Circulation in Rheumatoid Arthritis.**—Ewart emphasizes the efficacy of this method in reducing the swelling and the pain associated with the intra-articular effusion of synovial fluid, or the para-articular effusion of lymph. He says that the immediate relief afforded in cases of acute arthritis, whether rheumatic or gonorrheal, and in cases of sprain, is equally striking. In joints chronically thickened or fixed the improvement reported has not resulted in a complete cure.

17. **New Triple Staining Process.**—Bonney's technic is as follows:

1. Fix small pieces of the tissue in acetic-alcohol. (The fixatives of Hermann and Flemming may be used if preferred. The older and inferior fixatives such as alcohol, are useless as regards the fine details for which this process was devised, whilst formalin renders it impossible of performance.) 2. Embed, cut, and mount in the usual manner. 3. Stain for one hour in a saturated watery solution of saffranin. 4. Wash in water. 5. Stain for a quarter of an hour in a saturated watery solution of methyl violet. 6. Wash in water and wipe the slide dry except that part occupied by the section. 7. Have ready in a drop-bottle the following solution: to 20 cubic centimeters of acetone add drop by drop a saturated watery solution of orange G. until the flocculent precipitate which slowly appears on shaking is just dissolved in excess of the watery solution; then filter. 8. Flood the slide with this solution. A cloud of color immediately comes out which obscures the view of the section. 9. Pour this off on to blotting-paper and flood again with the same solution. The color cloud being much fainter the section can be watched. 10. When the section has attained a rather faint brownish-pink color, pour off the orange acetone solution. 11. Wash in acetone for a few seconds. 12. Wash in xylol. 13. Transfer to low-power microscope and see if the proper result has been attained. 14. Wash in two fresh changes of xylol. 15. Mount in xylol-balsam.

All chromatic elements, nucleoli, and certain nuclei, such as those of polymorphonuclear leucocytes, stain a rich violet, chromosomes standing out with peculiar distinctness. The spindle fibers of nuclear mitosis stain a faint pink. The cytoplasm stains a rose pink. The intercellular tissue stains a pale yellow. These effects are best seen if the slide be examined through a deep blue screen.

Indian Medical Gazette, Calcutta.

January.

19 Double Commissions. D. G. Crawford.
20 *The Three Days' Fever of Chitral. A. Contribution to the Study of the Unclassed Fevers of India. R. McCarrison.
21 Forms of Pyrexia Due to Leishman-Donovan's Bodies. U. N. Brahmachari.
22 Case of Piroplasmosis—Splenectomy Followed in Eight Months by Death. J. Smith.
23 Case of Recurrent Plague. G. I. Davys.
24 Last Plague Epidemic in the Giridih Sub-Division, District Hazaribagh. S. L. Sarkar.

20. **Chitral Fever.**—McCarrison describes this affection as an acute infectious disease epidemic in the Chitral Valley during the summer months and characterized by a single paroxysm of fever of typical course which persists for about three days without marked local affection. The paroxysm is accompanied by severe headache, pains in the back, bones, joints and muscles, and is followed by severe prostration, which continues for ten days or more after the attack. The virus of the disease is unknown. It does nat seem to be contagious and requires a high atmospheric temperature for its development. As a rule, one attack confers immunity. Complications, with the exception of a terminal bronchitis, are few. The mortality is nil. The treatment is symptomatic.

Bulletin de l'Académie de Médecine, Paris.

25 (Year LXX, Nos. 2-3.) Discussion of Restriction of the Medical Use of the Roentgen Rays to Physicians. See news item, page 372.
26 La récente épidémie de choléra en Allemagne et ses enseignements. A. Chantemesse and F. Borel.
27 Autosynoptomètre à miroir. Armaignac and Chauvel.

Archiv f. klinische Chirurgie, Berlin.

Last indexed page 391.

28 (LXXVII, No. 4.) Zur pathologischen Histologie des Gasser'schen Ganglions. R. Caminiti (Naples).
29 *Ueber Dauerfolge nach operativer Behandlung des Morbus Basedowii (remote results). Friedheim.
30 *Die operative Behandlung der eitrigen Meningitis. H. Kümmell.
31 *Technik, Wirkung und specielle Indication der Rückenmarks-Anesthesie (spinal analgesia). A. Donitz (Bonn).
32 *Experimentelle und klinische Beitrage zur Lebernaht und Leber-Resection (plates of magnesium for suturing liver). E. Payr and A. Martina.
33 Die operative Behandlung der Prostata-Hypertrophie. H. Kümmell.
34 *Zur Kenntniss der primären Muskel-Tuberculose. F. Kaiser.
35 *Zur Klinik und path. Anatomie der malignen Hypernephrome. P. Albrecht.
36 Die Autolyse als Heil-Factor in der Chirurgie, insbes. die intravitale Verstärkung autolytischer Vorgänge durch Roentgen-Strahlen. B. Heile.

29. **Operative Treatment of Exophthalmic Goiter.**—Friedheim declares that enucleation or resection of part of the struma is the only means known to date by which exophthalmic goiter can be permanently cured. He reports his experience with 20 cases. Fourteen patients were completely cured, the interval since the operation ranging from four to nearly sixteen years. Five were improved to such a degree that they can support themselves, one by sewing, the others as saleswomen. In 3 cases the patients realize that great improvement was effected, but as some of the symptoms still persist they are being advised to submit to another operation. One of the patients has died; possibly too little of the thyroid gland was left. This assumption was confirmed by the fact that the severe tetany observed subsided under thyroid tablets. In one case the right lobe was enucleated, but the symptoms by the end of the year were nearly as bad as at first. The left lobe was then extirpated and the patient was permanently cured. This was eight years ago. The statistics from four large clinics show 75 permanent cures and 23 much improved out of 109 cases, with 8 deaths. With internal treatment the mortality is estimated at 12 per cent., and permanent cures seem to be out of the question, he says.

30. **Operative Treatment of Suppurative Meningitis.**—Kümmell reports a case of a severe meningitic process following fracture of the base of the skull. Pus was evacuated by lumbar puncture and the patient—a healthy man of 33—recovered after bilateral and extensive trephining. Kümmell's experience has been that lumbar puncture will afford great relief, even when the process is too far advanced for hope of recovery.

31. **Spinal Analgesia.**—Donitz reviews his experience with 407 cases in which spinal analgesia was induced for operations. Cocain was used in 296 cases, stovain in 102 and eucain in 7. One of the reasons for the occasional failures observed at first was that the needle had been inserted in the cauda equina, not in the open space. If a tube is full of fluid, holding it slanting does not change the position of the fluid, but if it contains only a little fluid this flows to the lowest point when the tube is slanted. If the cerebrospinal fluid is under high pressure, raising the pelvis does not change its position, but if there is only a small amount in the spinal cavity raising the pelvis allows it to flow toward the head. The by-effects of spinal analgesia are those of an aseptic meningitis. They can be avoided by using the least irritating substance as a vehicle for the anesthetic and the smallest possible amounts. The ideal method, Donitz thinks, would be to inject the anesthetic directly into the segment of the spinal roots which correspond to the region on which the operation is to be performed. The danger of injury to the spinal cord renders this impracticable, but this ideal is approximated by making the injection as high as can safely be done, that is, between the second and third or first and second lumbar vertebræ, and then, by raising the pelvis or by constriction of the neck, forcing the anesthetic indirectly to the desired point. In cases of by-effects, castor oil seems to be useful. He remarks that in operating on the abdomen it is of no benefit to have the legs and pelvis anesthetized also. It is sometimes possible to accomplish the desired result with as little as 1 c.c. of the solution, if the pelvis is raised. When the cerebrospinal fluid is very scanty it is wise to use more of the vehicle. This is done by aspirating a little of the fluid into the syringe instead of merely injecting the anesthetic into it. This dilutes the anesthetic and insures its better diffusion. In case of deficient flow of the cerebrospinal fluid it is wiser to refrain from spinal anesthesia for operations at the umbilicus or above, for fear that it may prove a failure.

32. **Magnesium Plates in Suturing the Liver.**—Payr describes considerable experimental work which demonstrates the ease and security with which the liver can be sutured after resection, when the stitches are taken through holes in a couple of magnesium plates as stays. He gives a number of illustrations to show the technic and the results.

34. **Primary Tuberculosis of the Muscles.**—Kaiser reports a case in a woman of 70 and reviews the 17 cases recorded in the literature. The other patients were mostly young and recovered after operative treatment.

35. **Malignant Disease in the Kidneys: Hypernephroma.**—Albrecht has had occasion to observe, at Hochenegg' clinic, 28 cases of a malignant tumor in the kidneys derived from suprarenal tissue. In 18 cases the tumor was on the left side. Hematuria was noticed in only about a third of the cases. Local pain was a frequent symptom; in some cases it was noted from four to fifteen years before the true nature of the trouble became manifest. In a few instances there were

digestive disturbances. A differential point is that the symptomatic varicocele accompanying the growth does not subside as the patient reclines, like ordinary varicocele. The age of the patients ranged from 28 to 66. A very important feature of these cases is the metastasis. Frequently the metastasis in some bone is the first revelation of the hypernephroma. This occurred in 4 of the total 28 cases. In one the metastatic tumor was in the forehead, in another in the femur, knee or clavicle. The possibility of a primary hypernephroma should be suggested by the discovery of a rapidly growing, solid tumor in the bone in a person between 40 and 66. The urine should be repeatedly examined. The findings were negative in only 1 of these 4 cases; in the others the urinary findings gave the clue to the nature of the trouble. Treatment should be nephrectomy; partial resection, he thinks, is dangerous. Operation was undertaken in 24 cases, and of the 16 patients who survived the operation 9 have since died from local recurrence or metastasis and another from intercurrent pneumonia without a trace of recurrence. A tendency to tardy metastasis is manifest. Of the 16 patients who survived the operation, only 4 remained healthy for more than four years, and 3 of these 4 developed metastases after that interval. Consequently there is only a single patient in good health to-day, after an interval of four years or over, out of the 24 operated on within the last ten years. The article concludes with a study of other features in regard to these growths and their mode of development, both anatomic and clinical.

Berliner klinische Wochenschrift, Berlin.

37 (XLII, No. 46, November 13.) Einige Ergebnisse der experimentellen Krebsforschung (cancer research). E. F. Bashford, J. A. Murray, and W. Cramer (London).
38 *Der Schilddrüsenkrebs der Salmoniden (Edelfische) (thyroid cancer in fishes). L. Pick.
39 Weiteres zur Lehre vom echten doppelten Herzstoss (double heart beat). K. Doll.
40 Untersuchungen ueber dos Vorkommen von Spirochæte pallida bei Syphilis. Roscher. (Concluded).
41 Spirochæte pallida bei einem mit Blut geimpften Makaken (in inoculated monkey). E. Hoffmann.
42 (No. 47.) *Injury of Eye from Injection of Paraffin.—Ueber Schädigungen des Auges nach Paraffin-Injektionen bei Sattelnase. W. Uhthoff.
43 Ueber den Nachweis Eberth-Gaffky'scher Bacillen in der Cerebrospinalflüssigkeit bei Typhus abdominalis. A. Schütze.
44 *Prostatahypertrophie und Diabetes. C. Posner.
45 Individualität und Psychose. C. Neisser. (Concluded).
46 Die moderne Behandlung der tuberkulösen Spondylitis. C. Helbing. (Concluded).
47 (No. 48.) Simulation und Geisteskrankheit bei Untersuchungsgefangenen (mental disease in criminals). E. Siemerling.
48 Zur bakteriologischen Diagnose des Welchselbaum'schen Meningococcus. F. Kalberlach.
49 Sahli's Test of Chemistry of Stomach.—Zur Sahli'schen "Desmoid"-Reaktion. F. Elchler. See THE JOURNAL, p. 1819, vol. xliv.
50 Beitrag zur Kenntnis hysterischer Sprachstörungen (disturbances in speech). O. Mass.
51 *Klinische und experimentelle Erfahrungen ueber Reizungen des Herzvagus (excitation of cardiac plexus). A. Rehfisch.
52 Wann und wie soll der praktische Arzt die Retroflexio uteri behandeln (in general practice). Stoeckel.

38. **Endemic Cancer Among Brook Trout.**—Pick has been investigating the thyroid cancer found in a salmon and has found it to be identical with the "gill disease" endemic among salmon and brook trout in certain parts of the world. Bonnet in 1883 reported the loss of 3,000 lake trout in the fish hatchery at Gardasee from the rapid growth of tumors on the floor of the mouth and gills. A similar endemic was reported from Scotland in 1888 and from New Zealand in 1901. Nothing of the kind has been observed in the hatcheries in Germany. The neoplasms which Pick examined were unmistakable epitheliomas of the thyroid gland. They occurred endemically in certain hatcheries among the same species and always at the same age, when the fish were over two years old. Sporadic cases also occur and wild salmon are also liable to be affected. The proportion of the brood affected ranged from 2 to 7 per cent. As the affection seems to be restricted to certain hatcheries in certain countries, and to certain species of fish in the hatchery, the local conditions must exert some influence in the matter. This throws light on the endemic character of cancer. The variability of the histologic findings recalls that of the epithelial tumors of the mamma in mice, and there is also a striking analogy between the trout cancers and malignant cancer of the thyroid in man. Pick does not think that the circumstances indicate necessarily a parasitic origin for the growths. He is more inclined to admit that a primary, merely hyperplastic, strumous proliferation of the thyroid gland, simple endemic goiter, in consequence of some external deleterious influence (possibly the composition of the water), causes a transformation of the originally harmless growth into malignant carcinoma. The article is profusely illustrated and continued to No. 49.

42. **Injur of Eye from Paraffin Injections for Saddle-Nose.**—Uhthoff has had two experiences of this kind. In the first, embolism of the arteria centralis retinæ developed immediately after injection of paraffin with a melting point of 43 C. It was the third injection, the two others having been made eight and five months before. He theorizes that the paraffin, still in a fluid state, must have passed into a vein and thence through the lungs and entered the arterial circulation, reaching the arteria centralis retinæ in this way. In the second case a man of 57 had been successfully treated for saddle-nose, but after working in the garden on a very hot day a few months later he experienced a strange sensation in the eyelids and rubbed them. They swelled to such an extent that he was unable to open his eyes. Erysipelas was diagnosed at first, but excision of a scrap of lid tissue revealed that the trouble was inflammation from the presence of paraffin. In order to enable the patient to see at all, the large, hard, tumor-like masses which closed the eyelids completely were removed in several sittings, with the result that the patient is able to open his eyes enough to see. The inflammatory giant-cell proliferation in and around the droplets of paraffin was evidently the result of both the mechanical and the chemical action of the foreign body, the paraffin, which had found its way into the lids. Several somewhat similar cases ha e been published, but none in which the resulting disfigurement was so severe. He reviews the literature on the subject, citing several cases of blindness, and concludes with the warning not to inject too much paraffin at a time, and not to inject it in the centripetal direction of large venous tracts. He advises waiting a sufficiently long time before repeating the injections, to arrest the circulation in the adjacent blood vessels during the injection, and to use paraffin with a nigh melting point. Accidents have been reported after the use of hard paraffin, but they have not been so numerous or so severe as those after injection of paraffin with a low melting point.

44. **Hypertrophied Prostate and Diabetes.**—Posner calls attention to the liability of overlooking an affection in the prostate when treating a diabetic patient. The prostate may be hypertrophied and cause disturbances which are credited to the diabetes, even during the periods when the patient has been freed from glycosuria. In other cases the pronounced hypertrophy of the prostate causes the physician to overlook impending or established diabetes. In his experience in the last ten months he has encountered 5 out of 30 cases of hypertrophied prostate in which unmistakable evidences of diabetes were found by searching for them. He is inclined to believe that the enlarged prostate has a distinct influence in predisposing to diabetes, as there is usually arteriosclerosis in such cases. He does not attribute the hypertrophy of the prostate to arteriosclerosis, but regards it as a new growth of a fibromyomatous or adenomatous nature. Persons thus affected are frequently arteriosclerotics, and there is certainly some connection between arteriosclerosis and diabetes. The slow healing and the course of wounds and the gangrene in diabetics are due to the affection of the smaller arteries. The frequency of sclerosis, calcification and atheroma in diabetics has long been noted. Treatment of hypertrophied prostate should, therefore, aim to ward off injurious influences from possible glycosuria. The repugnance to meat, characteristic of retention of urine, renders it difficult to feed such patients properly, and yet they have special need for a nourishing diet. The dangers of catheterization and of operative intervention are magnified by the presence of diabetes. Zuckerkandl lost a patient from diabetic coma after a successful prostatectomy.

51. **Stimulation of the Cardiac Pneumogastric Nerve.**—Rehfisch found in the course of much experimental and clinical research that stimulation of moderate intensity applied to the

cardiac pneumogastric nerve reduced the heart rate temporarily. The arrhythmia observed after febrile affections, in meningitis and in intestinal affections and in children is evidently due to irritation of the cardiac pneumogastric. He does not accept this as an expression of the affected heart itself, but rather as a reflex phenomenon.

Centralblatt f. d. Grenzgebiete der Med. u. Chir., Jena.

Last indexed XLV, page 1766.

53 (VIII, Nos. 18-21.) *Ueber Spondylitis im Gefolge akuter Infektions-Krankheiten (typhoid spine, Spondylitis typhosa, infectiosa). K. Fluss. Critical analysis of all published cases. (Commenced in No. 17.)

54 (No. 23.) *Present Status of Torticollis.—Ueber den gegenwärtigen Stand der Lehre des muskulären Schiefhalses. G. Zesas. Critical review of the literature. (Commenced in No. 18.)

53. Spondylitis Following Acute Infectious Diseases.—Fluss summarizes the conclusions derived from analysis of the cases on record, discussing the differential diagnosis, prognosis, treatment, etc. The importance of avoiding overexertion or a fall soon after an acute infectious disease is clearly demonstrated by the experiences related. Trauma certainly is a factor in the development of spondylitis after acute infectious diseases. Witzel even incriminates trauma in the bathing of typhoid patients as responsible for "typhoid spine" later. Every case of lumbago occurring after typhoid should be treated as if it were typhoid spine. Kuhn advises thorough examination of the spine from time to time after typhoid fever. Rest in bed is the main reliance in treatment. Moorehouse and Pallard and Taylor and Cannon have also found that rest in bed for three months proved successful after failure of all other measures. In severe cases, immobilization of the spine may be necessary besides the rest in bed. Quincke reports that a patient dismissed with a cast was almost completely cured by the end of a year. With immobilization, supplemented by cauterization and antiphlogistic measures, Bonardi cured his patients in 2 severe cases in sixteen and forty days. In a case reported by Schanz, the plaster bed banished immediately the intolerable pains. In four weeks a model for a leather corset could be taken and in two weeks more the patient was able to sit up and was cured by the end of the third month. Schanz insisted further that the corset must be worn regularly for a time and that the patient must sleep in the plaster bed. Rest in bed and antiphlogistic measures are sufficient only in the very mildest cases. He recommends placing the spine in the lordosis position as much as possible, as this best relieves the pain. In severe and threatening cases treatment should be active, as for tuberculous spondylitis. The physician should never rely on the spondylitis proving harmless. Newcome applied extension with an 8 pound weight in one case, curing the patient in a month. Quincke also applied extension in one case with improvement in six months, but the deformity persisted unmodified. Franke proclaims that all affections of the bones and joints after influenza demand extremely cautious treatment; irritation of the slightest kind, even gentle massage, is liable to aggravate the trouble beyond remedy in the acute and even in the chronic stage. Mercurial treatment is indicated at the slightest suspicion of lues. In only one of the cases on record was there necessity for incision and evacuation of pus. This was in a case occurring after influenza; the entire arch of the fourth thoracic vertebra was found decayed. Franke believes that the lesion heals under conservative better than under active measures. He obtained the best results from hot baths and hot applications. Drafts are particularly injurious during and after influenza. Sodium salicylate with an antipyretic was useful in the more acute cases. Some patients thought they were helped by ichthyol salve, others by very gentle massage with chloroform oil, especially during the later stages, but every careless pressure caused intense pain and aggravation of the trouble. The foremost indication is rest and protection of the affected part. The patients must be encouraged, as the trouble is so tedious that they early despair of complete recovery.

54. **Torticollis.**—Zesas concludes from his analysis of the published cases that treatment of muscular torticollis can not be schematic, but must be individualized to each case, with special regard to the duration of the affection, the changes in the muscle and the resulting disturbances. In all cases seen early massage and orthopedic treatment should be tried first. Incision and division, not only of the shortened muscle but also of all the contracted cords, is the standard procedure. The after-treatment must be adequate, and in all severe cases and in case of relapse partial extirpation of the sternocleidomastoid with an eventual plastic operation on the muscle is indicated. In case of spasmodic torticollis, resection of the cervical nerves, especially when preceded by resection of the spinal accessory nerve, has given better results than division of the muscles. The operation is the more promising the fewer muscles are involved in the spasmodic contraction. Kalmus has collected 95 cases treated by operation. The results, although far from constantly successful, yet should encourage surgical intervention after failure of conservative measures.

Münchener med. Wochenschrift, Munich.

55 (LII, No. 48.) *Displacement of Trachea and Larynx.—Die Verlagerung der Luftröhre und des Kehlkopfes als Folge gewisser Veränderungen der Brustorgane. H. Curschmann.

56 *Consequences of Torsion of Appendices epiploicæ.—Ueber die Drehung der Appendices epiploicæ und ihre Folgen (Corpora aliena und Stränge im Bauche). Riedel.

57 *Die Mobilisierung der skoliotischen Wirbelsäule mit einer aktiven Methode. R. Klapp.

58 *Importance of Congestive Hyperemia in General Practice.—Ueber die Bedeutung der Bier'schen Stauungsbehandlung akuter Entzündungen für die chirurgische Poliklinik und den praktischen Arzt. W. Danielsen.

59 *Ueber die Behandlung der entzündlichen Erkrankungen der Tonsillen mittels Saugapparaten (suction apparatus). O. Prym

60 Ueber Klinik und Technik der Publotomie. M. Reeb.

61 Ueber Komplikation von Scharlach mit Ikterus (scarlet fever). O. Gross.

62 Apparatus for Fermentation Test for Sugar in Urine.—Die quantitative Zuckerbestimmung im Harn und ihre klinische Bedeutung nebst Beschreibung eines neuen Gärungsapparates, Gärungs-Saccharo-Manometer. B. Wagner.

63 *Ueber ein einfaches Säuglingsbad (infants' bath-tub). B. Sperk.

64 Simple Method of Obtaining Material for Examination of Stools.—Eine einfache Methode zur sterilen Stuhlentnahme bei Kindern. L. Jehle.

55. **Displacement of Trachea and Larynx.**—Curschmann noticed that dilatation of the aorta sometimes pushed the trachea and larynx to one side. He found this displacement of the air passages also in a case of pneumothorax. It might serve to differentiate pneumothorax from a cavity in the lung. He has noticed also that a process of shriveling in the thorax is liable to pull the trachea over on the side affected. He gives illustrations of 2 cases of marked displacement from dilatation of the part of the aorta nearest to the trachea.

56. **Consequences of Torsion of Appendices Epiploicae.**—As mentioned in the editorial on page 124, Riedel has encountered a number of cases in which serious results had followed torsion of one of the small pouches of the peritoneum filled with fat, known as the appendices epiploicæ. In six instances the torsion had resulted in the detaching of the end, the escaping fat then acting like a foreign body in the abdomen. He knows of only a single similar case on record. The serous inflammation resulting from torsion of an appendix epiploica resembles that observed in appendicitis. In one case the twisted pedicle of the appendix epiploica had constricted the small intestine to which it was adherent. In 2 other cases the appendix epiploica was included in a hernia. These cases demonstrate anew how extremely sensitive the omentum is to the slightest irritation. The reducible hernia had existed for years without disturbances, but pain developed at once when the included appendix epiploica became twisted. His first patient suffered from attacks of pain suggesting gallstones. No tumor could be detected by palpation. Adhesion of the gall-bladder was assumed, but the operation revealed merely two small foreign bodies of fat tissue loose in the abdominal c vity. They were nearly as large as cherries. The patient committed suicide three years afterward, and two other similar foreign fatty bodies were discovered loos in the abdomen. In another case an operation for assumed recurring appendicitis revealed merely a loose foreign body about 1.5 cm. long by .75 cm. thick. The symptoms in another case suggested gallstone colic with icterus. Oil was given without effect. The gall-bladder was found soft and was removed, although there were no evidences of stones. Two fatty bodies were found lightly adherent to the transverse colon and a third loose on the meso-

colon, while a number of appendices hung by narrow pedicles from the colon. The symptoms in another case were chills and abdominal pain, watery and fecal vomiting. The only cause for the peritonitis that could be found on operating was a crescent-shaped appendix epiploica, with a loose, fat foreign body nearby, which had evidently escaped from it. The peritonitis continued its course and the patient succumbed forty-eight hours later. Micro-organisms resembling the colon bacilli were cultivated from the center of the foreign body. At the autopsy nothing pathologic could be detected in any organ to explain the peritonitis, aside from the fatty body that had escaped from the pouch of the appendix epiploica.

57. **Mobilization of Scoliotic Spine by an Active Method.**—Klapp has succeeded in transforming patients with scoliosis and weak backs into "back athletes," as he calls them. He develops the muscles of the back astonishingly and exercises the spine by a method which, he thinks, brings the muscles into play better than any conceivable apparatus. The patients are instructed to creep on the floor, the hand and knee on the same side close together or else stretched as far apart as possible. This is the ordinary four-footed gait exaggerated. As the patient takes a "step" he is instructed to stretch his hand as far forward and his foot as far backward as possible, drawing the hand and knee on the other side close together and at the same time looking back toward his foot on the concave side. He turns and looks backward on the other side as he takes the next step with the hand and foot on the opposite side. It is surprising, Klapp remarks, how the muscles of the back and pelvis are brought into play by these motions. They can be exaggerated still further by bringing the foot on the concave side across beneath the trunk and bending the extended arm toward the concave side. The hands and knees are protected by leather and the children think these exercises are great fun. The benefit is soon apparent. Before commencing the exercises superheated air is applied to the spine for twenty minutes to secure the mobilizing action of hyperemia. His contrivance for this purpose is a large box containing the source of the heat; the patients sit on stools, each with his back against a corresponding window in the box. In conclusion Klapp urges general practitioners to treat scoliosis in this way, especially after a course of orthopedic treatment, to confirm the results obtained. He does not weary the children by calling on them for any other exercises, reserving their strength exclusively for the creeping movements. The article is illustrated.

58. **Congestive Hyperemia or Acute Inflammations.**—Soon after Bier's revolutionary announcement that acute inflammation should be regarded not as something to be combated, but as one of Nature's curative processes which the physician should strive to promote, Küttner introduced the Bier technic into his clinic. The results of treatment on this principle of 105 patients with carbuncles, felons, phlegmons, infected wounds, lymphangitis and similar affections have converted him to an enthusiastic advocate of the new therapeutic congestive hyperemia. He calls it "the greatest therapeutic achievement of recent surgery." Its chief advantages, he says, are the doing away with the necessity for large incisions, with resulting scars, and for tamponing, while it reduces the length of treatment and prevents serious functional disturbances in joint and tendon sheath affections. It is indispensable, however, he adds, that Bier's directions should be closely followed, and that the application of the constricting band should always be closely supervised by the physician. It should never be left to the judgment of the patient or nurse. If medical surveillance is not possible, then this method of treatment should not be attempted. [Similar laudatory articles have appeared in many of our German exchanges. E. Guth states that the cessation of the pain is his criterion for the amount of constriction necessary to induce the proper dose of congestive hyperemia. He says that the relief is as great as from a generous injection of morphin, and that the method shortens the time of treatment and has the further advantage of reducing the danger from contamination of the physician's fingers with septic material. His experience with it in general practice is related in the *Prag. med. Wochft.* for January 18.—ED.]

59. **Treatment of Tonsillitis with Suction Apparatus.**—Prym writes from Leo's clinic at Bonn to describe the excellent results attained in inflammatory affections of the tonsils by application of a suction apparatus to induce congestive hyperemia. The cup fits over the tonsil and is connected by a tube with the suction pump. No by-effects were noticed, except excessive secretion of saliva, during the application of the cup. He adds that it did not seem to distress the patients unduly.

63. **Infants' Bath Tub.**—At Escherich's clinic the infants sleep in an oval basket which fits into an iron standard. When the basket is lifted out, a sheet is laid over the oval frame of the standard, the ends tied below. A piece of rubber cloth is then laid over the sheet. A convenient and easily sterilized individual bath tub is thus provided for each infant. Or two wooden chairs can be placed with their seats together, facing each other, the legs tied together to prevent slipping. A sheet is then laid over the backs of the chairs and tied or held with safety-pins to form the bath tub, over which the sheet of rubber cloth is laid.

Gazzetta degli Ospedali, Milan.

Last indexed XLV, p. 2033.

65 (XXVI, N. 133.) *Importanza del Corpi di Negri, nella diagnosi pratica della rabbia (rabies). C. S. Materazzi.
66 Raddoppiamento del secondo tono come sintomo piu significativo della stenosi mitralica (reduplication of second sound). A. Germani. Four cases.
67 Hereditary Goiter.—Il gozzo ereditario e la sua influenza sullo sviluppo psichico dell'individuo. G. Corsini.
68 *Effects of Extirpation of Semilunar Ganglion.—Sugli effetti della estirpazione del ganglio celiaco. A. Pieri.
69 *Silver Nitrate in Pneumonia.—Il nitrato d'argento nella cura della polmonite franca. A. A. Belfadel.
70 L'isteria in medicina legale. G. Vetrano.
71 (No. 136.) Le mastzellen (mast cells). C. C. Ducati.
72 Caso di eritromelalgia. G. Severino.
73 (No. 139.) *La posizione del corpo nell'asma e sue varie forme. L. Minervini and P. Tagliamuro.
74 Sulla genesi dello schok. F. Passarelli.
75 *Gangrena delle estremita nelle malattie infettive. A. Montini.
76 (No. 142.) *Recent Progress in Therapeutics. U. Baccarini.
77 *Sull'azione dell' acido formico e dei formiati sul cuore e sulla circolazione (formiates and the heart). S. Livierato.
78 *La percussione dello sterno (sternum). M. Landolfi.
79 La stovaina come anestetico locale. L. Marchetti.
80 (No. 145.) Influenza del sistema nervoso sull' assorbimento cutaneo ed intestinale (absorption in frogs). C. Carlo.
81 Distrofie e trofoneurosi. G. Morelli.
82 Ricerche sperimentali sulla morfologia degli elementi figurati del sangue (of blood). Triolo.
83 (No. 148). Studio del fenomeno respiratorio di Cheyne e Stokes. G. Curlo.
84 Pseudo-reumatismo articolare acuto in soggetto isterico (in a hysteric). O. P. Goggia.
85 Hemolytic Power of Syphilitic Serum Before and After Mercurial Treatment. Ricerche sul potere emolitico del siero di sangue dei sifilitici dopo la cura e sulla resistenza delle loro emazie a sieri eterogenei. M. Pergola.
86 *Tetano ed iniezioni ipodermiche di chinina. G. Grixoni.

65. **Negri Bodies in Diagnosis of Rabies.**—This communication from the Catania Institute of Experimental Hygiene affirms the constant presence of the Negri bodies in animals with natural or experimental rabies. Materazzi is convinced that they are the specific causal agent of the disease. Inoculation of rabbits should never be omitted, as there is always a possibility that the suspected rabid animal may have been in that phase of the incubation when the saliva has acquired virulence, but the micro-organism has not reached the stage in its development when it proliferates in the cells. The search should be long and minute before proclaiming negative findings. Materazzi has never missed finding the Negri bodies. [In a communication from the Berlin Institute for Infectious Diseases, Bohne corroborates the specific value of the Negri bodies as a constant finding in rabies. It is published in the *Zeit. f. Hyg. und Infekt.*, XXV, No. 1. He found the bodies constantly in 200 brains and regards them as specific. He does not believe in their parasitic nature, as they are comparatively large, while rabies virus can pass through a filter. Another argument against their parasitic nature is that they are seldom found in the spinal cord and at other points where the tissues prove virulent when inoculated. The bodies seem to collect principally in the center of the hippocampus major. He has simplified Negri's technic and announces that his modified technic allows the discovery of the Negri bodies in three hours after receiving the material. This is extremely important when persons have been bitten by an animal which shows no other signs of rabies. The discovery of the Negri bodies settles the question as to the necessity for Pasteur treatment. His technic may be summarized as follows: Acetone for thirty to forty minutes; paraffin for sixty to seventy-

five minutes; imbedding, cutting into sections, mounting and drying; staining for one-half to four minutes with Mann's solution (35 c.c. of 1 per cent. aqueous solution of methylene blue and 35 c.c. of 1 per cent. solution of eosin, plus 100 c.c. of distilled water); brief rinsing in water; brief rinsing in absolute alcohol; absolute alcohol, plus solution of soda, for fifteen to twenty seconds; rinsing in absolute alcohol; water for one minute; water plus acetic acid for two minutes; rapid drying and imbedding. The Negri bodies were described in these columns on page 1490 of volume xliv.—ED.]

68. **Extirpation of Semilunar Ganglion.**—Pieri was unable to detect anything abnormal in 8 rabbits after removal of part of the celiac plexus. As soon as the wound had healed the animals were apparently in normal health for months afterward. The loss of the semilunar ganglion did not seem to have any influence on the weight of the animals. Methylene blue taken into the stomach passed into the urine just as promptly as in the sound animals.

69. **Nitrate of Silver in Pneumonia.**—Belfadel relates the histories of 24 patients with pneumonia treated with 15 cg. of silver nitrate daily. He remarks that the results were not such as to encourage its further use.

73. **Attitude in Asthma.**—In differentiating the various forms of asthma, Minervini lays great stress on the attitude during the attack. In bronchial asthma the patient gets up and goes toward a door or window seeking for air, supporting himself by a chair or window frame, retaining his sense of direction and coördination. If he can seize the back of a chair with both hands he clings to it, his shoulders raised and his body stooping forward. In cardiac asthma the patient is much weaker during an attack. He sinks into a chair or sits on the side of his bed, immovable, dumb, anxious, supporting himself with his hands on the seat of the chair or bed beside him. In uremic asthma the patient also assumes this position from lack of energy to rise, but he is much agitated and tosses his arms and legs about, the convulsive agitation sometimes passing into a rapidly fatal depression. He gives illustrations of the various types.

75. **Typhoid Gangrene.**—The robust young man whose case is described succumbed to the effects of gangrene of the leg, a complication of typhoid fever. He had injured his leg in a bicycle accident a week before the onset of the typhoid. It is possible that the trauma may have caused a place of lesser resistance in the artery where the typhoid bacillus set up the arteritis responsible for the fatal gangrene.

76. **Recent Progress in Therapeutics.**—Baccarani refers exclusively to Italy in his remarks. He congratulates his Italian confrères on the marked caution they have displayed in accepting and using the new drugs with which the markets are being constantly flooded. The tendency is constantly more apparent, he says, to return to the old, tried remedies of the pharmacopeia. "Why," he exclaims, "should we abandon the wealth of material which the long and continued experience of men, past-masters in the art of observing, has established as effectual? All we have to do is to go over the indications for their use with the aid of the lights of modern medical knowledge." In regard to organ therapy he thinks that results have not justified the high anticipations at first and that the subject requires much more study before it is definitely accepted that the extracts of certain organs are able to supplement the lacking, the exaggerated or the perverted internal secretions of certain organs. Vastly more encouraging is the outlook in what he calls "the new branch of the medical sciences, medical surgery." By this he means the close co-operation of the physician and surgeon in affections such as cirrhosis of the liver, nephritis, appendicitis, etc., and the therapeutic use of lumbar puncture. He says that serum treatment in the hands of the Italians has continued to give fine and durable results, as also the milk of immunized cows. Lucatello treats anemia with serum from animals previously treated with blood from anemics. Baccarani refers also to Bozzolo's successful treatment of leukemia with the *x*-rays, Tizzoni's encouraging experiences with radium in rabies and the continued success of Baccelli's intravenous injections of drugs in threatening conditions. The Italians have also confirmed the importance of salt in dropsical affections, restriction of salt tending invariably to reduce the effusions.

77. **Action of Formiates on the Circulation.**—Livierato was unable to discover any appreciable action on the heart or vessels from administration of formic acid or the formiates.

78. **Percussion of the Sternum.**—Landolfi has noticed increased resonance over the sterum when there is a cavity in the lung. When the resonance over the sternum persists as the patient reclines, but vanishes when he lies on one side, this can be accepted as a sign of hydrothorax or pyopneumothorax. Banti was the first to call attention to the retrosternal dullness observed in case of pleurisy with effusion, which aids in differentiating it from pneumonic lesions. Livierato affirms that the normal aorta does not alter the plessimetric findings over the sternum, but when the artery is dilated or altered by age there is dullness. The dullness becomes more pronounced as the trunk is bent forward. Enlargement of the right auricle is also liable to induce dullness.

86. **Tetanus and Subcutaneous Injections of Quinin.**—Grixoni reviews the various cases on record in which tetanus followed subcutaneous injection of gelatin, vaccine or quinin. He also relates experiences carried on at the Scuola d'Applicazione di Sanita Militare to determine whether tetanus germs can survive an ordinary solution of quinin. Tetanus spores are able to live in solutions of quinin, such as are currently used for subcutaneous injection, maintaining their vitality and virulence for a long time. Heating the solution to 105 C. for ten minutes or to 100 C. for twenty minutes always killed the spores in his tests. His further experiences disproved the assumption that injections of quinin have any influence on tetanigenous germs which may be present in the organism in the latent state. Fifteen years ago injections of quinin were comparatively rare, yet 615 deaths from tetanus occurred throughout Italy. The number has constantly declined, until last year there were only 250, and 162 of these patients were farm hands or stablemen. The military statistics have ceased to list tetanus, showing that there has been no mortality from this cause during the last few years, although the number of injections of quinin is now very large. The cases of tetanus observed after subcutaneous injection of quinin must have been due to contamination of the solution used, the germs finding a favorable soil for developing in the conditions produced by the injection of the quinin in a hypertonic solution. The reason that such accidents are not observed after injection of morphin, caffein, strychnin, etc., is because these drugs do not cause anatomic changes at the point of the injection. When the quinin was dissolved in a physiologic saline solution no trouble of the kind has ever been observed. This assumption that the tetanus was the result of the development of the germs in the histochemical lesions produced at the point of the injection is sustained by the fact that quinin by the mouth has never displayed any general or local action in respect to tetanus. Grixoni refers frequently to Vincent's article, summarized in these columns on page 1646 of vol. xliv, 1905. He thinks that the results in Vincent's cases were due to the destructive changes induced by the concentrated solution which he used. The osmotic tension of the blood must have been violently disturbed.

Books Received

Acknowledgment of all books received will be made in this column and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits, or in the interests of our readers.

MY SYSTEM, Fifteen Minutes' Work a Day for Health's Sake. By J. P. Müller. With 44 Illustrations (from Photographs) and a Time Table. Authorized Translation by G. M. Fox-Davies, from the Fifth Edition (30th Thousand) of the Danish Original. First Edition. Published by Tillge's Boghandel, Copenhagen, 1905. Paper. Pp. 90. Price, 75 cents. Agents for America, New York: G. E. Stechert & Co.

BIENNIAL REPORT OF THE BOARD OF TRUSTEES OF MILWAUKEE HOSPITAL FOR INSANE, for the Two Years Ending Sept. 30, 1904. Paper. Pp. 55. Madison: Democrat Printing Co., 1905.

INDIGESTION, an Elementary Study of Its Causes and Treatment. By F. Clarke. Cloth. Pp. 85. New York: William Wood & Co.